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The Use of a Signal Device Self-Monitoring Program to Improve On-Task Behavior of Special and General Education Students

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THE USE OF A SIGNAL DEVICE SELF-MONITORING PROGRAM TO IMPROVE ON-TASK BEHAVIOR OF SPECIAL AND GENERAL EDUCATION STUDENTS

by

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A project submitted in partial fulfillment

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ABSTRACT

The Use of a Signal Device to Teach Self-Monitoring to Improve On-Task Behavior of Special and General Education Students

by

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Research has shown that self-monitoring can increase on- task behavior with students in the classroom setting. This project examined the use of a signal device to teach self monitoring to increase on-task behavior of special education students with behavioral problems. Participants were two elementary school para-educators and two K-4th grade students. During a two part process, baseline and intervention was conducted by the researcher with each student evaluating his/her on-task behavior. The researcher examined the reliability of the data on the student's on-task behavior. The researcher found that the student's on-task behavior increased with implementation of the signal device self-monitoring program. The implications from the success of this project for the use of self-monitoring programs to increase students' on-task behavior are discussed. (31 Pages)

Introduction

Self monitoring is a procedure whereby a person observes his/her behavior systematically and records the occurrence or nonoccurrence of a target behavior (Cooper, Heron, & Heward, 2007). Self monitoring encourages students to attend to their own specific behaviors, observe whether they occur, keep track of the occurrences of the behaviors, and reward themselves for improvements. This process enables and encourages students to improve those behaviors (Magg, Rankin, & Reid, 1995). Self-monitoring has helped students with and without disabilities increase on-task behavior in the classroom, decrease talk-outs, decrease aggression, improve performance in various academic subject areas, and complete homework assignments (Cooper et al., 2007). However, change in one's own behavior may never be fully realized because of inconsistencies in the administration of the self-monitoring program, such as failure to follow through with monitoring by the student, lack of supervision by the para-educator, and failure to properly train the student on how to use the self-monitor program. In one of the first studies using self-monitoring to modify student behavior, the researchers noted that the self-monitoring had little effect for one of the participants (Broden, Hall, & Mitts, 1971). Researchers attributed this finding to the absence of contingencies established by the educator on the student's use of the self-monitoring form and, thus, the program lost its effectiveness. These failures can be avoided by properly training an educator or para-educator to use self-monitoring programs effectively.

Literature Review

For this study, a literature search was completed through the ERIC database, as well as through Google Scholar. The following terms were used to find articles: MotivAider, self-monitoring, self-monitoring programs, self-recording, on-task behavior, special education, and cueing device. Twenty-five articles were reviewed and three were chosen for this literature review based on their relevance to the research question being addressed. The first article by Broden et al., (1971) was reviewed because the faults found in the implementation of the self-monitoring program that were discussed were similar to what this study tried to improve upon. The other two articles were reviewed based on their relevance to the methods and tools which were used in the implementation of this study. One study included the use of a clear and specific student self-monitoring checklist. The other included use of a Motivaider signaling device. Both of those tools were found to be effective in the reviewed studies and both were used in this study.

Studies have shown that self-monitoring, when properly implemented, can be an effective strategy to manage student on task behavior (Amato-Zech, Hoff, & Doepke, 2006; Broden et al., 1971; Cooper et al., 2007; Dalton, Martella, & Marchand-Martella, 1999). Self-monitoring has been shown to correlate with improved attention, increased academic achievement, and decreased off-task behavior. Self-monitoring involves self-tracking and self-recording by the student (Broden et al., 1971; Cole, Marder, & McCann, 2000; Shapiro & Cole, 1994). Self-tracking requires that a student pay specific attention to a specific behavior and whether the behavior is occurring or not at a specified time. In self-recording, the student records whether or not the behavior being observed has occurred (Amato-Zech et al., 2006).

One of the first studies which examined the use of a self-monitoring system to modify student behavior was conducted by Broden et al., (1971). In this study, two junior high school students, (one male, Stu, and one female, Liza), were identified as having off-task behaviors. Before beginning the self-monitoring program, Liza was receiving a D- in the history course and attending to instruction only 30% of the time. The dependant variable in the study was specific to off-task behavior as defined in relation to each student. Baseline data for Stu showed that talk-outs averaged 1.1 times per min during the first half of the class, and 1.6 times per min during the second half of the class (Broden et al., 1971). In this study, for both students, the independent variable was use of a self-monitoring form. Liza kept track of the number of times she was attending to instruction, and Stu kept track of the number of times he talked out during class. Both students were instructed to fill out the self-monitoring form at their own discretion. Liza was given a check-off sheet, and was instructed on how to use it during her history class. Liza was told to put a mark down every time she was attending to instruction. There were no specific guidelines for how often she should be monitoring her behavior. There were also no consequences that were explained to Liza which would result from her failure to be on task. The only consequence that she experienced was verbal praise from the classroom teacher when she attended to instruction and a consequent lack of verbal praise when she was not attending to instruction. In Stu's instance, he was handed the form, which said "Put a mark down every time you talk out." He was instructed to do this during the length of the class. Similar to Liza, there were no specific guidelines for how often he should be monitoring his behavior. The article notes that for Stu there were no positive consequences when he successfully decreased his talk-outs in class, or negative

consequences for when he did not decrease his talk-outs. For Liza, her frequency of attending increased from 30% during baseline to 80%-88% while using the self-monitoring forms. Stu's talk-outs decreased during class from between 1.1 and 1.6 times per min to 0.3 times per min (Broden et al., 1971). The authors of this study concluded that using self-monitoring and recording procedures modified these students' on-task behaviors. These results were similar to results later published by Dalton, Martella, and Marchand-Martella (1999) where participants who used self-monitoring decreased off-task behavior.

Another study conducted by Dalton et al. (1999) examined the use of a self-management system to decrease off-task behavior in two students with learning disabilities. These students were Caucasian males in the eighth grade. Pre-baseline observations revealed that they were off-task 90% of the time in their various classes. During the course of this study, the students used a self-management program in three of their classes. These courses were held in a middle school. For this study, the independent variable was the self-management system consisting of three different components. One of the components included a self-monitoring form with the heading "Are You Working?" The students were responsible for checking a *yes* or *no* box at the end of every 5-min interval. The students used the classroom clock to monitor themselves. In a second component, the students used a checklist which covered three class segments (before, during, and after) and for each segment the students evaluated specifics: (a) was homework completed prior to class, (b) did I self-monitor behaviors, and (c) do I have homework tonight. The final component of the self-monitoring program was the student completing a behavior rating scale on the overall behavior for the class period. The

lowest a student could score was a *one* the highest was a *five*. The student had to conference with his teacher at the end of the class period to see if his rating matched the teacher's. If it did not, the teacher and the student had a conversation about where the discrepancy was found. They also discussed what the student could do to improve behavior and better meet expectations overall. Based on the students' performance for the day, up to five points were earned. Once the student accumulated a determined number of points for each of four consecutive days, he earned a candy, a soda, or extra credit points. The positive consequence for improving on-task behavior was earning a treat or extra credit. The negative consequence for failure to be on-task was not earning points toward the treat or extra credit. The dependant variables for this study were specific off-task behaviors listed as: (a) not in seat, (b) talking with others, (c) interrupting others, (d) not working on the assigned task, and (e) engaging in bodily movements unrelated and/or interfering with the assigned task. Following the implementation of this self-monitoring program, both boys' off- task behavior dramatically decreased. Both students went from being off-task an average of 90% of the time to being off-task 16-21% of the time. According to Dalton et al. (1999): "The results of this study demonstrated the effectiveness of self-management in reducing the off-task behavior displayed by two adolescent males with disabilities" (p. 175). One limitation of this study was that the teacher observations were only conducted for 10 min out of a 55 min class period. During a 10 min window conducted at the same time every day (so the student was expecting it to happen), the researchers captured only a small snapshot of the behavior. Given the findings of Broden et al. (1971), and more recent research conducted by Dalton et al.

(1999), evidence suggests that a self-monitoring system can effectively increase on-task behavior.

Amato-Zech et al. (2006) examined the effects of a MotivAider signal device on increasing on-task behavior. This study focused on three fifth grade students, two males and one female, who had been identified through teacher referrals as having low-levels of on-task behavior. All three students participated in the same self-contained special education classroom of an elementary school. For this study, the independent variable was a self-monitoring program using the MotivAider signal device as a tool for prompting students to track their behavior. The dependent variable was on-task behavior during 45 min reading and writing periods. The study defined on-task behavior as actively or passively attending to instruction or assigned work (Amato-Zech et al., 2006). Off-task behavior was defined in three categories: off-task motor (e.g., randomly flipping pages in book); off-task verbal (e.g., humming, blurting out answers, talking to classmates); and off-task passive (looking away from the assignment). Data were collected using a 15 s partial interval recording system. If the student engaged in off-task behavior at any time during the interval, the student's behavior was recorded as off-task rather than on-task for that interval. Direct observations were conducted for 15 min per day, two to three times per week for each student. After the implementation of this self-monitoring program, the student's on-task behavior went from a mean score of 55% to more than 90% of the intervals. Researchers found that all of the teachers strongly agreed that intervention procedures were beneficial to the students. They also found that the intervention procedures were easy to implement with sufficient training. This study further found that student on-task behavior increased with use of a Motivaider, despite

there being no positive consequences for increasing on-task behavior. There were also no negative consequences for failure to increase on-task behavior. These findings replicate the results from other studies that students who have behavioral or learning challenges can successfully change their behavior with self-monitoring systems (Amato-Zech et al., 2006). Further, the findings of Broden et al. (1971), Dalton et al. (1999), and Amato-Zech et al. (2006) show that using self-monitoring systems with specific interval recording measures increase students' on-task behavior compared to the same interventions without a self-monitoring program.

Purpose Statement and Research Question

Self monitoring programs have been shown to improve students' on-task behavior. However, a component of the self-monitoring program consistently omitted in previous studies has been examining the use of the self-monitoring program in relation to the student's performance. Prior research has asserted the ease of implementation of self-monitoring programs (Johnson, 2007; Navarrette, 2006). The purpose of this study was to examine components and strategies of the self monitoring program that are beneficial for a para-educator's use of a signal device-self monitoring program to improve on-task behavior of special education students with behavioral problems. The following research questions were addressed: (a) Given two K-3rd students in special education classes, what effect would use of a signaling device, with a self-monitoring program have on increasing a student's on- task behavior during reading time in the special education classroom, and (b) given para-educator training in self-monitoring, to what extent would fidelity of implementation relative to monitoring students' on-task behaviors improve from baseline to intervention?

Method

Participants and Settings

Para-educator participants. Two para-educators participated in the study. The para-educators teach K-4th grade students at least 30 min of reading instruction 4 days a week. The para-educators were chosen based on the age of students with whom they work, their access to specific students, and their willingness to volunteer to participate in the study. Para-educator demographics can be found in Table 1.

Table 1

Demographics of Para-Educator's Involved in Project

Para-educator Name	Gender	Classification	Ethnicity
Para-Educator A	Female	Special education para-educator	Caucasian
Para-Educator B	Female	Special-Education Para-educator	Caucasian

Student participants. Two students at an elementary school in Utah participated in this study. The students were K-4th grade students who receive special education services for at least 30 min of instruction time four days a week in the special education behavioral classroom. Eligibility to participate in the study was determined by the researcher. Participants were chosen based on (a) high rates of off-task behavior in the

academic setting, (b) low reading scores in reading classes, (c) qualification for special education services given Utah State Office of Education criteria (USOE, 2006), and (d) written informed consent from participants' parents or legal guardians regarding participation in this research. Participants' reading grades in the special education class were below grade level achievement accompanied by a low number of assignments completed and turned in for credit.

Setting. Sessions took place in the researchers' special education behavior classroom. In the special education behavior classroom, there were 6 to 8 other students with disabilities present.

Para-Educator Training

Before implementing the use of the signal device for the self-monitoring program to improve on-task behavior, the two para-educators were taught to properly use a self-monitoring system with their student participants. Training was conducted by the researcher. Training consisted of an explanation of the functions of the signal device, modeling how to observe and record on-task data and how to interact with student participants after a session. There were two training sessions for the para-educators.

Training para-educators to use the functions of the device. The researcher showed the two para-educators how to use the signaling device in a training session before the program began. The researcher explained how to turn on the device, how to set the time interval for observations, and how to turn the device off.

Training para-educators to observe and record on-task behavior-modeling & practice.

Modeling. The researcher assumed the para-educators role for the modeling session. The researcher demonstrated for the para-educator how to observe and record student behavior. The researcher conducted a mock observation of another teacher playing the role of a student who had been told to engage in off-task behavior while completing a lesson. The researcher modeled for the para-educators how to record a "+" or a "-" based on the student's behavior at the exact moment the device signals. At the next signal, they were to do the same – record the student's behavior at that exact moment. It was important that the para-educators understood that the behavior in the preceding minute was not what was being recorded. The researcher trained the para-educators how to interact when the student's records were similar for on-task behavior and when they had differing records of on-task behavior. Scripted responses can be found in Appendix B. Modeling sessions were conducted until para-educators were recording on-task behavior with 80% accuracy for ten 5 min trials.

Practice. The researcher assumed the students role for the para-educators practice session. The researcher demonstrated on-task and off-task student behaviors for the para-educators so they could observe and record student behavior. The researcher and the para-educators recorded a "+" or a "-" based on the researchers behavior at the exact moment the device signaled. At the next signal, they did the same, and recorded the researcher's behavior at that exact moment. The behavior in the preceding minute was not what was being recorded. The para-educators practiced using the scripted response

after each session. Practice sessions were conducted until para-educators were recording on-task behavior with 80% accuracy for ten 5 min trials.

Interactions with student participants. After co-recording on- and off-task behavior, the para-educator and student met at the end of the reading session. The researcher trained the para-educators how to interact when the student participant had similar records of on-task behavior and differing records of on-task behavior. When there were similar records of on-task behavior, the para-educator praised the student. The para-educator stated specific examples of on-task behavior that were identified. The para-educator also presented the student with the pre-designated reinforcer. When there were differing records of on-task behavior, the para-educator discussed with the student what behavior the para-educator had observed. The para-educator then asked the student if that specific behavior was an on-task or off-task behavior. The para-educator referred to the list of specific behaviors as necessary. The para-educator then discussed alternative, on-task behaviors with the student.

To track the success of this project, the two para-educator participants were evaluated by the researcher. The researcher used a procedural fidelity checklist on para-educator implementation of self-monitoring. This checklist can be found in Appendix A.

Student Training

Before implementing the signal device for self-monitoring, individual students were taught to use the device by the researcher. Students learned correct use of the signaling device while participating in two training sessions. The beginning of the training session consisted of completing a preference assessment with the students. For

the preference assessment, each student was presented with three items. These items included small toys and pieces of candy. The students were asked which of the three items they would like to try and earn for the session. The students were told what criteria for on-task behavior they would need to meet to earn their preference assessment choice. Once the researcher had identified each student's preference choice, and had explained the desired behaviors which were being looked for, the training began. Students practiced marking their behavior on 15 s intervals for 2 min. The researcher explained to the student that each time the signaling device vibrated s/he was to mark on the tracking sheet if s/he was on-task or off-task. If the student was on-task at that moment s/he was to mark a "+". If s/he was off-task s/he was to mark a "-". The researcher told the student to mark a "+" or "-" each time the signaling device vibrated. The researcher concluded student training by switching the signaling device to 'run' and the researcher then began the training session. The researcher told the student when to stop tracking him/herself and turn the device off.

Dependent Variables

Student on-task behavior. The dependent variable, on-task behavior, was defined specifically for each method of instruction and can be found in Table 2. These specific behaviors made up the classroom rules and were familiar to the students prior to beginning the implementation of the self-monitoring program.

Table 2

Criteria for On-task Behaviors for Specific Types of Instruction

	Lecture	Independent work
Sitting in seat, feet on floor, facing forward	Yes	Yes
Head up, eyes on presenter or material	Yes	No
Head down, eyes on material	No	Yes
Writing down and answering questions	No	Yes
Sit quietly while others finish task	Yes	Yes
Following given instructions	Yes	Yes
Raising hand to have question answered	Yes	Yes

Para-Educator identification of on-task behavior. Para-educator identification of on-task behavior was identical to the student identification of on-task behavior. Refer to Table 2.

Data Collection Procedures

The student, the para-educator, and the researcher collected 1 min momentary time sample data during the 30 min period. If the student was on-task when the signal device vibrated, a "+" was recorded independently by the student, the para-educator, and the researcher. If the student was not on-task when the signal device vibrated, a "-" was recorded independently by the student, the para-educator, and the researcher. The student, the para-educator, and the researcher all used the same format data collection sheet.

Inter-observer agreement on para-educator's observations. Inter-observer agreement (IOA) was assessed once prior to program implementation and once after program implementation to ensure fidelity. Signaling devices were used by the para-educator and the researcher and synchronized for accuracy. IOA was calculated and recorded by comparing agreements to agreements plus disagreements between the para-educator and the researcher. Percentage of agreement was defined as the number of agreements divided by the number of disagreements plus number of agreements multiplied by 100.

Procedural integrity on para-educator's observations. The measurement used to show para-educator procedural fidelity in implementing a self monitoring program with use of a signaling device was a checklist (see Appendix A). There was a pre- and post- observation conducted utilizing the checklist. Success of para-educator procedural fidelity was measured by tallying number of "yes" and "no" responses to eight questions. For each session to be considered as implemented with fidelity, the para-educator must have had at least six out of eight questions circled yes. Any score less than a six out of eight was considered unsuccessful and the para-educator would have had a retraining session with the researcher. The checklist used can be found in Appendix A.

Reading Lessons. The reading lessons given to the students for the 30 min period were provided by the para-educators and the researcher. These lessons included timed readings, previously learned material, new material, lecture, and independent work.

The Intervention Process

During the intervention process there were two phases; (a) baseline, and (b) intervention. Before the implementation of the study, the students had all been taught and understood the classroom rules and consequences.

Baseline phase. Baseline was initiated with all students at the same time. During baseline, para-educators collected data daily on each student's on-task behavior. Baseline continued until student's on-task behavior was stable or trending down for a minimum of three sessions. During baseline, no self-monitoring was in effect. There were no consequences for negative student behavior. There were also no rewards for positive student behavior. The researcher collected IOA data on the on-task data collected by the para-educators.

Intervention phase. During the intervention phase, the para-educators and students were self-monitoring on-/off-task behavior. Students marked a "+" or a "-" at each minute interval. Para-educators reviewed students' daily recording and their on-task behavior. At the end of the session, the students and paras compared their data. If their data corresponded at 90% accuracy and if the student met the criteria for on-task behavior, the student earned their reinforcer. If 90% accuracy was not reached, the para-educators provided consequences dependent on the accuracy of the students recording and on the students' on-task behavior. In regard to on-task behavior, the criteria for reinforcement initially was 10% better than the baseline level. Then the criteria for student reinforcement was raised every other day until the level in intervention phase stabilized at an acceptable rate for each student.

Example:

Baseline is 40% on-task behavior

1st criteria = 50%	Two consecutive days at 50% to earn preference assessment
2nd criteria = 60%	Two consecutive days at 60% to earn preference assessment
3rd criteria = 70%	Two consecutive days at 70% to earn preference assessment

Selection of consequences was based on a student preference assessment in which student's picked a top choice each day from three items. The students pre-selected which three items they chose from prior to the session beginning.

Results

Student Results

The results of baseline for the students show low, stable rates of on-task behavior. After intervention from the para-educator, the on-task behavior increased. The difference between baseline and intervention on-task scores is notable. For student one, the mean baseline rate was 23% on task. With intervention, the mean on-task rate was 71%. For student two, the mean baseline rate was 33 % on task. With intervention, the mean on-task rate was 83%. Figures one and two show a comparison of baseline and intervention data for the students.

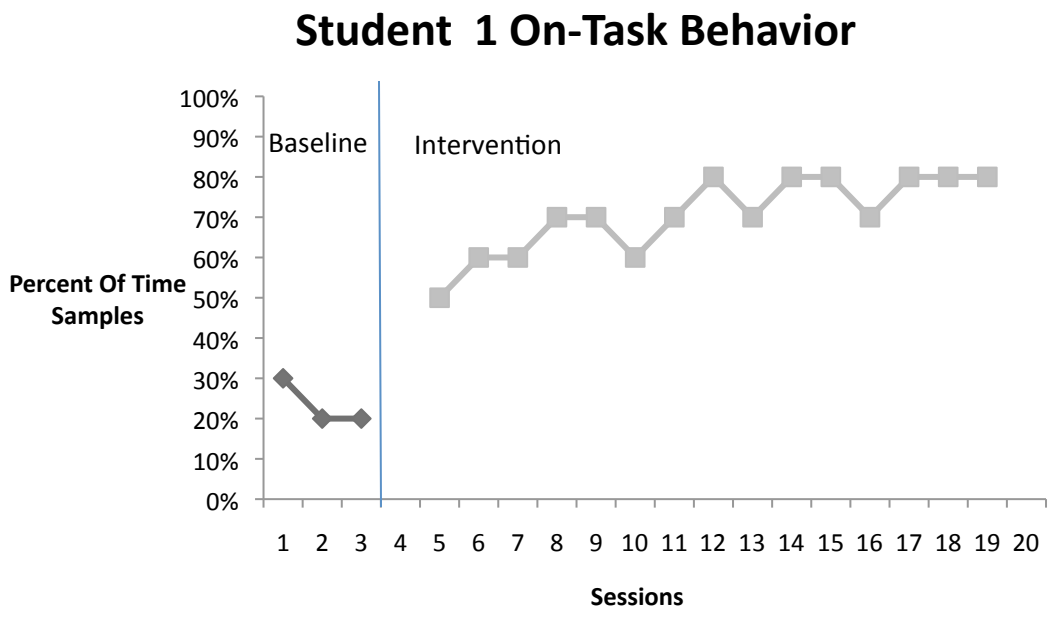

Figure 1. Results of Student 1's on-task behaviors

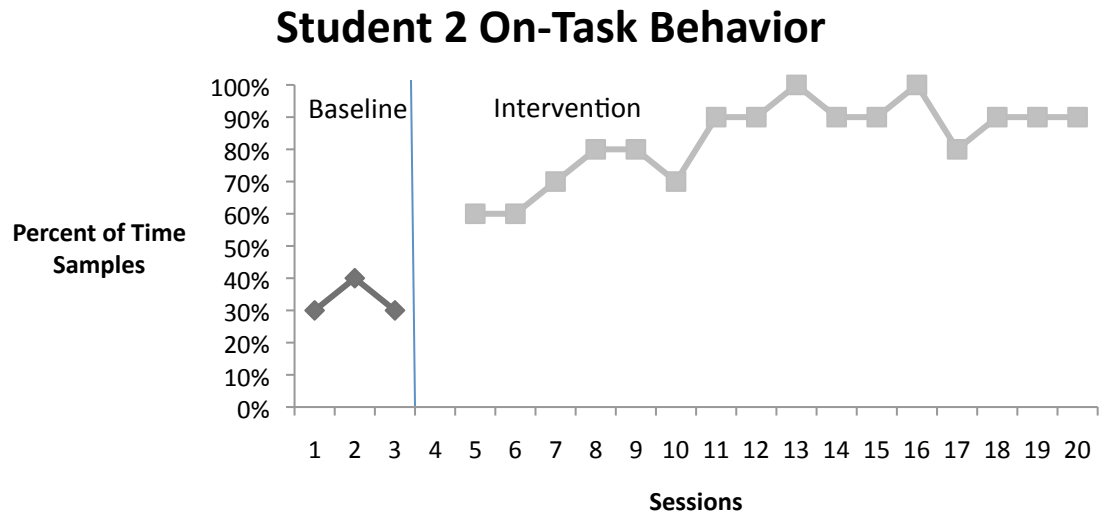

Figure 2. Results of Student 2's on-task behaviors

Fidelity of Para-Educator Implementation Of Self-Monitoring Program

Fidelity of para-educator implementation of the self-monitoring program was assessed twice in a pre- and post-observation of the para-educators. A checklist covering eight different criteria was used in the observation. For a session to be implemented with fidelity, the para-educator needed to receive six out of eight "yes" answers on observed criteria. Para-educator one went from 88% during pre-observation to 100% for post-observation. Para-educator two went from 75% during pre-observation to 100% for post-observation.

Inter-observer Agreement On The On-Task Measure

Inter-observer agreement was calculated once prior to program implementation and once after program implementation to ensure fidelity. The researcher also compared agreement between the para-educators and himself for each session. If agreement fell below 90% the researcher would have conducted a retraining with the para-educator. Due to careful training and practice sessions with the para-educators prior to program implementation, no agreements fell below 90%. Overall inter-observer agreement for the duration of the project averaged 98% for para-educator one and 99% for para-educator two. The researcher, as well as both para-educators, noted that the project was easy to implement and run due to clear expectations for student behavior, as well as clear procedures for the para-educators to follow.

Discussion

The researcher correctly anticipated that both para-educators would implement a signaling device self-monitoring system that increased student on-task behavior in a

special education setting. For two K-4th grade students in special education classes, the use of a signaling device, with a self-monitoring program increased a student's on-task behavior during reading time in the special education classroom. The findings extended current research by demonstrating the effect of a self-monitoring program using a Motivaider. This study has implications for special education para-educators who teach students with high levels of off-task behavior. Results of this study suggest how monitoring fidelity in the implementation of a self-monitoring program helps to increase student on-task behavior.

Interactions with student participants. In this study, the researcher found that the interaction with the student participants went well. The student's responded well to both the immediate positive feedback, as well as the positive, yet constructive, criticism. The use of a scripted response by the para-educators left no option for any negotiations with the students. Expectations were clearly described for the students and failure to meet the expectations were discussed in a positive yet firm manner.

Student training. In this study, the researcher found that the training of the students was easy and straightforward. The students were highly motivated to earn their specific reinforcer which was predetermined by the preference assessment. It was interesting to note how hard the students would work, and how much their on-task behavior improved, for something as simple as a small candy. The researcher did note that for the students who participated in the study, two male students in a behavior special education classroom, it was difficult for them to mark either a "+" or a "-". It took the students longer to create the mark and contributed to the lesson having a choppy rhythm. The researcher would suggest creating a sheet which already had "+" or "-" for the students to

circle at each signal. This could be more effective and more conducive to a smoothly flowing lesson and work time.

Dependent variables. The dependent variable of monitoring student on-task behavior was made clear and easy to identify with the use of Table 2 – *Criteria for On-task Behaviors for Specific Types of Instruction*. These criteria were clearly identifiable for the para-educators. The para-educators also reviewed with the student, prior to each session, what the on-task behaviors for the session were.

Data collection and procedures. During the course of this project, the researcher noted that the collection of data on a 1 min momentary time sample during a 30 min period was not the most conducive to a smoothly flowing work time for the students. The students having to stop and create a "+" or "-" on their tracking sheet every minute created a choppy feel to the lesson and perhaps kept on-task behavior from reaching higher rates. Once the students had created their "+" or "-" , and had restarted their reading lesson, the signaling device was vibrating again and the students were needing to make another recording. The researcher would suggest using a 3 min momentary time sample during a 30 min period instead. The researcher would also suggest using a sheet which already has a "+" or a "-" for the students to circle accordingly, instead of having the student create their own mark. While creating the "+" or "-" had no ill effect on the observer or the para-educators, it was too time consuming for the students in the behavior special education classroom. The researcher would also suggest utilizing a fading frequency of intensity for the self-recording. The researcher would suggest scaling back to a 3 min time sampling, then a 5 min time sampling, followed by a time sampling that was on sporadic intervals. This could help sustain the program more easily for the para-

educators, special education teachers, and even general education teachers as students return to general education classes.

Intervention phase. During the intervention phase, the researcher noted difficulty in using the pre-determined procedure of adding 10% to the student's baseline on-task behavior data to determine the next acceptable rate of growth for each student. The problem arose when student's made gains greater than 10% of their on-task behavior naturally. If a student progressed from 30% to 60% after program implementation began, the researcher did not see the benefit in scaling the student's on-task behavior back to 40%, knowing that higher levels of on-task behavior could be reached. A better solution would be to determine an acceptable growth rate for the student based on an average of two days observations of on-task behavior. If for the first two days of program implementation the student went from 30% during baseline to 60% and then 50% on-task behavior, an acceptable next goal of on-task behavior would then be 55%, versus 40%, which the original "baseline-plus 10%" aspect of the project called for. Note that the criteria for on-task behavior went up to 80% for the last few sessions for each student and was then kept at 80% thereafter. It became evident that 90% would not be attainable for these students, so the criteria was kept at 80% so the students could feel success.

Limitations.

Findings from this study were limited by sample size. Replication with a sample size larger than two para-educators and two students should be conducted to affirm the findings of this study. Potential future research could address a para-educator's fidelity

in implementing a signaling device aided self-monitoring program for multiple students in a general or special education setting.

Another limitation of this project was that no data were collected on para-educator fidelity of the self-monitoring program over long periods of time. While this study may found that para-eduators properly implemented the program while being monitored, para-educators may become less consistent in their implementation over time and when they begin to use this program with additional students. Maintenance studies should also be conducted, with observations of para-educators every two or three months after completion of the intervention, to assess if para-educators are retaining fidelity of implementation of the self-monitoring program. Another limitation of this project was that one can't infer cause from an AB design since there is no experimental control. A further limitation is the natural maturation process of the students as they get older.

Finally, it is important to note that while on-task behavior is important, it is not in itself the goal of an educational program. Rather, the point of increasing on-task behavior is to create an educational environment in which students pay better attention to instruction and, thereby, acquire skills and knowledge more effectively. In that light, future studies might examine whether improved on-task behavior is accompanied by improved academic achievement.

Appendix A

Procedural Fidelity Checklist On Para-Educator Implementation Of Self-Monitoring Program

Para-Educator Name: _____

Student Name: _____Grade Level: _____

Fidelity Checklist	*Pre-Observation Date:*	*Post – Observation: Date:*
Para-educator explained to the student how to use the signaling device	Yes No	Yes No
Para-educator identified specific on-task and off-task behaviors for the kind of lesson	Yes No	Yes No
Para-educator explained to the student how to fill out the self-monitoring sheet	Yes No	Yes No
Para-educator established with the student		

what the received reinforcer would be for a specific number of on-task observations	Yes No	Yes No
Para-educator looked for on-task behavior and marked the data collection sheet immediately when the cueing device signaled	Yes No	Yes No
Para-educator met with the student after the period to compare identification of on-task marks	Yes No	Yes No
Para-educator provided the appropriate consequence	Yes No	Yes No
Para-educator followed the script for interacting with the student	Yes No	Yes No
6-8 Marked Yes= Session was implemented with fidelity ***< 5 Marked Yes= Session was not implemented with fidelity***	_____ Yes _____ No	_____ Yes _____ No

Observer's Anecdotal Notes on Para-Educators Implementation of Program:

Appendix B

Scripted response for student who successfully matches para-educators record of behavior - Student has earned their Preference Assessment choice

Para-educator: Congratulations _____ (student's name)! You did an excellent job today. You _____, _____, and _____ (provide 3 examples of positive behaviors – head up and eyes on the presenter, head down and eyes on the material, etc). You have earned your _____ (preference assessment item).

Scripted response for student who had limited success matching para-educators record of behavior – Student has still earned their Preference Assessment choice

Para-educator: You worked hard today _____ (student's name). You _____ and _____ (provide one or two examples of positive behaviors). For next time, you need to work on _____ (provide example of negative behavior). You have earned your _____ (preference assessment item).

Scripted response for student who did not have success matching para-educators record of behavior – Student did not earn their Preference Assessment choice

Para-educator: You did not meet your goal today _____ (student's name). You need to work on _____, _____, and

_____. You did not earn your _____

(preference assessment choice). We will try again tomorrow.

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