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# Effects of Digital Video Feedback Package with Elementary-Aged Males Identified With Behavior Problems

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EFFECTS OF DIGITAL VIDEO FEEDBACK PACKAGE WITH ELEMENTARY

AGED MALES IDENTIFIED WITH BEHAVIOR PROBLEMS


by


Jenifer Buist


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# ABSTRACT

Effects of Digital Video Feedback Package with Elementary-

Aged Males Identified with Behavior Problems

by

Jenifer Buist, Master of Science

Utah State University, 2014

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Following directions and working independently can be a challenge to students with behavioral problems.  Students with behavioral and emotional challenges often follow directions and work independently while in the special education classroom; but while in their regular education classroom, the instances of following directions and working independently may decrease greatly.  This study evaluated a digital video recording feedback program designed to increase the instances of following directions and working independently in the regular education classroom of elementary aged males who have been identified with behavioral problems.  The program included a daily tracker, digital video observation self-evaluation of the target behavior observed on the recording, and delayed feedback and reinforcement for following directions and working independently.  Three students from a public elementary school participated.

The results of the study show that the interventions provided increased following directions for Subject 2 and increased instances of working independently for Subject 3. Subject 1's following directions behavior continued to show inconsistencies throughout the interventions.  We were unable to maintain criterion levels during the treatment phase, so the interventions were concluded with no follow-up with Subject 1.

(45 pages)

**PUBLIC ABSTRACT**

Effects of Digital Video Feedback Package with Elementary-

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Classroom teachers are constantly trying to find the answer to those many behavior situations that arise on a daily basis in schools.  In this study, we looked at the benefits of using a digital recorder in the classroom to help students become more "aware" of their behaviors.  The study was done in a rural, public elementary school with three males that ranged from third grade to fifth grade.  Each of these three boys has been identified as students with either specific learning disabilities or emotional disturbances.  This program was run by the resource teacher and a trained para-professional.

The methods of this study included a digital recording of classroom activities with a focus on the three students.  On a daily basis, each student would watch the recording with the resource teacher and evaluate their behaviors.  The students were asked to self-evaluate their behaviors before discussing them with the resource teacher. The results for two of the three subjects were a decrease in the target behavior while the third subject's results were not consistent.  With additional time and training, this subject could also benefit from this program.

The benefits of this program could reach individual students to improve their classroom behaviors while benefiting the entire classroom as well.  Teachers will be able to teach and students able to learn without being interrupted by behavior incidents.

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**INTRODUCTION**

In schools today, students are faced with countless amounts of stimuli from teachers and peers. The majority of students can manage this much stimuli successfully. There are some students, however, who find it difficult to manage their actions when excessive stimuli are presented to them. These students are often classified with an emotional or behavioral disorder. Children diagnosed with emotional and behavioral disorders frequently have difficulties interacting with peers in an acceptable manner (Epstein, Kauffman, & Cullinan, 1985; Friedman et al., 1988; Gresham, 1982). These students may have difficulty understanding the social cues other elementary aged students understand, may engage in bullying, and often react without thinking about the consequences of their actions. Most classroom programs for students with emotional and behavioral challenges frequently include tangible reinforcement for desirable peer interactions as well as explicit training in the area of social skills (Hollinger, 1987; Kauffman, 1989). In a study of school programs for children with behavior disorders, Knitzer, Steinberg, and Fleisch (1990), argued that such programs are typically coercive and overly controlling, leaving little room for students to develop their own abilities to form friendships or to experience natural kinds of school routines and peer contact.

A lack of generalization and interference with the ongoing flow of student-to-student interactions are two other concerns with externally controlled contingency management programs. The success of special education programs is often measured by the extent to which students with disabilities' academic and behavioral

improvements transfer from their special education classrooms to mainstream regular classrooms settings (Reynolds, 1979).  Often when students with disabilities are removed from their regular classrooms for treatment in resource rooms or other special education settings, they exhibit academic and behavioral improvements in the special education settings but may not maintain the improvements after returning to their regular classrooms (Walker & Buckley, 1972; Wildman & Wildman, 1975).

One set of strategies gaining popularity and research support involves self-management (Nelson, Smith, Young, & Dodd, 1991; O'Leary & Dubey, 1979; Rosenbaum & Drabman, 1979).  Self-management approaches, including self-monitoring and self-evaluation, have been shown to be effective and to have a number of advantages when used with a variety of target behaviors and populations (Dunlap, Dunlap, Koegel, & Koegel, 1991). Self-monitoring is defined as the practice of observing and recording one's own academic and social behaviors (Hallahan & Kauffman, 2000; Rutherford, Quinn, & Mathur, 1996; Vaughn, Bos, & Schumm, 2000).  Being able to self-monitor reflects a shift from reinforcement by others to self-reinforcement of appropriate behavior (Hanson, 1996). For example, Christie, Hiss, and Lazanoff (1984) used self-monitoring techniques to increase attention and decrease inappropriate classroom behaviors of three elementary school children with behavior problems.  Rhode, Morgan, and Young (1983) used self-monitoring to facilitate generalization of target behaviors, as did Koegel and Koegel (1990) and Warrenfeltz et al. (1981).  Self-monitoring training is an appealing means of promoting behavioral improvements in a regular classroom

setting, since students who receive self-monitoring training depend less on their

teachers for guidance, reinforcement, and control than they did prior to training

(Workman & Hector, 1978).  Therefore, self-monitoring strategies can be useful in

improving behavior, in reducing the need of outside reinforcers, and generalizing

effective behavioral control.

Self-evaluation is a specific form of self-monitoring that involves teaching

students to judge the quality of their work, based on evidence and explicit criteria, for

the purpose of doing better work in the future. Self-evaluation is a potentially powerful

technique because of its impact on student performance through consistent self-

evaluation reports and an increase in the replacement behaviors (Rolheiser & Ross,

2001).

Most self-monitoring programs require immediate recording of target behaviors

which may interfere with the natural flow of a regular classroom and natural peer

interactions.  The use of videotape recording may be one method for incorporating self-

monitoring and self-evaluation without interrupting natural peer interactions in order to

provide the student with feedback.  For example, it would not be in a student's benefit

for an adult to interfere with an appropriate peer interaction in the moment in order to

give that student feedback on displaying the replacement behaviors.  Using videotaped

feedback allows the natural flow of peer interactions in the classroom to happen

without interruption; but the student is still able to receive the feedback from the adult

at a later time.  In two studies conducted by Kern-Dunlap et al. (1992), children's peer

interactions were improved by using a videotape feedback program.

**LITERATURE REVIEW**

In the first study, three subjects who had been identified with emotional and behavioral disorders were videotaped while engaging in interactions with other students.  The following morning, the subjects watched the video of their peer interaction and, using a questionnaire, self-evaluated their behavior during the interaction.  After a consultation with the teacher on their behavior, the subjects then received rewards for correctly identifying any pre-determined target behaviors portrayed in the video.  The subjects also received rewards for "matching" their self-evaluation to the teacher's evaluation.

In the first of the studies by Kern and colleagues (Kern-Dunlap et al., 1992), the authors looked at increasing appropriate peer interactions of elementary aged boys who had been identified with emotional disturbances while introducing a video feedback program.  The authors of the study videotaped each of the subject's peer interactions during designated activity sessions.  The next day, the facilitator and subject watched the video while stopping every 30 s to determine whether or not the subject displayed appropriate peer interactions during that interval.  The data suggested that once the treatment phase was introduced and maintained at criterion level, the undesirable peer interactions decreased even when the intervention was removed.  When baseline procedures were reintroduced, the frequency of undesirable peer interactions again increased, resulting in levels similar to the initial behaviors.  Reintroduction of video feedback produced low levels of undesirable interactions.

In the second study, Kern et al. (1995) took this research one step further by breaking down the interventions into separate components.  Researchers divided the video feedback program into three different components:  (1) rewards alone, (2) rewards plus discussion, and (3) self-evaluation plus rewards.  During the baseline phase, the frequency of inappropriate peer interactions was variable yet high for all of the students.  In the first treatment phase (rewards only), the subjects were told they could earn rewards for exhibiting appropriate interaction with their peers.  Subjects and facilitators discussed examples of inappropriate and appropriate peer interactions.  A criterion was set for inappropriate behaviors to decrease by 70% from the mean of baseline rates.  The criterion was based on the classroom teacher's judgment of reasonable behavioral improvements. In the second phase (discussion plus rewards), the subjects earned rewards in the same manner as they did in the rewards phase. Additionally, each subject participated in a 15-min discussion session with a facilitator on the school day following the activity session.  During these discussions, the subjects were asked to describe inappropriate interactions which they had engaged in during the previous activity session.  They were also asked to provide examples of appropriate interactions they could have used. In the last phase (self-evaluation plus rewards), daily 15-min discussions were held on the school day following the activity session.  During these sessions, the subjects were shown 5 min of videotape each day divided into 30-s intervals.  The subjects would watch only themselves, when the video tape was stopped, self-evaluate their behavior during the prior 30-s interval.  Participants responded to the

statement, "I got along with my classmates," with a "yes" or a "no" response on the recording sheet. The facilitator also watched the video and evaluated the subject's behavior in the same manner. If the subjects were accurate on the rating of their behavior, they would receive two points. If subjects and facilitator evaluations of the subject's behavior corresponded, then the subject would receive three points.

During phase one, the subjects' inappropriate behaviors decreased slightly but showed a lot of variability and no trend toward improvement. Inappropriate behavior rates were similar to what had been seen during the baseline phase. In phase two, frequencies of inappropriate interactions were observed at levels similar to the baseline phase. Once the video feedback phase was introduced, the authors saw immediate reductions in the frequency of inappropriate interactions. The frequencies remained low while the feedback procedures were in effect.

Based on the research produced thus far, self-evaluation training appears to be a viable means of promoting generalization in students with behavior problems; but few studies have demonstrated a practical application of self-monitoring training with students with emotional disturbances in a well-controlled study in naturalistic settings (Rhode et al., 1983). In the previous studies on self-evaluation or videotape feedback, there has been little research done on the effectiveness of these programs in the regular education setting with regular education peers as part of the intervention. Schools today are becoming more inclusive of all populations and we are seeing fewer classrooms for only students with Emotional Disturbances. Because of the inclusion

model, teachers are in need of an effective system to manage target student behavior while continuing to provide all students with an education. This study evaluated whether a digital video feedback program generalized the following directions and working independently behaviors of elementary students identified with behavior problems from the special education setting into the regular education setting. If effective, digital video feedback may be a viable method for students to identify and control their problem behaviors more readily.

The present study explored the possibility that a procedure similar to that of Kern-Dunlap et al. (1992) was useful for improving following directions and working independently of students with emotional and behavioral challenges with regular education students. We were interested in the peer interactions of these children in the regular classroom while they were interacting without direct adult involvement and without immediate contingencies to guide their behavior. Therefore, we evaluated the effects of a digital recording program on following directions and working independently of students with emotional and behavioral challenges when left to interact during an activity period in the regular education classroom. The intervention will include a daily tracker, digital recording feedback, self-evaluation, and delayed reinforcement from the teacher. To what extent will a digital recording feedback program used with elementary school-aged males identified as having either an emotional disturbance or behavioral concerns increase the following directions and working independently behaviors with non-disabled peers in a general education classroom?

**METHODS**

**Participants and Setting**

Three elementary aged boys participated in this study. Subject 1 and 2 are classified as students with an emotional disturbance and Subject 3 is classified as a student with a Specific Learning Disability with behavioral concerns in the area of working independently. Subject 1 and 3 are both third grade students and Subject 2 is a fifth grade student who all attend a public elementary school. Subject 2 and 3 receive academic services from the special education department as well as behavior interventions. Subject 1 attends only the regular education classroom with behavior interventions provided by the special education department. Subject 1 and 2 will be monitored on their following directions within 10 s while Subject 3 will be monitored on working independently.

**Dependent Measures**

Following directions within 10 s is defined as following one step directions given by an adult within 10 s. Following one step directions included beginning, continuing, and completing the task within a reasonable amount of time. *Working independently* is defined as paying attention to teacher, sitting up with back against chair, beginning work without a prompt, continuing and finishing his work without being prompted.

**Response Measurement and Interobserver Agreement (IOA)**

One resource teacher and one para-professional were the primary data collectors and conduct the sessions.  The percentage of following directions within an observation period was determined by dividing the number of directions followed within 10 s by the number of directions given.  The interobserver agreement (IOA) were recorded on the dependent measures for a minimum of 25% of the sessions for all phases.  IOA was calculated using the point-by-point method, which is found by dividing the total number of agreements by the total of agreements plus disagreements and multiplying that ratio by 100 to yield a percentage score.  In this study an agreement is defined as both observers reported that the subjects followed directions within 10 s (Subject 1 & 2) or worked independently (Subject 3).  A disagreement is defined as both observers not agreeing on whether the subjects followed directions within 10 s or worked independently.  Interobserver reliability data for each subject appear in Table 1. The means ranged from 80% to 88% agreement with an average of 83.6%.  Although a common standard for satisfactory inter-observer reliability does not exist for these subjects, recommendations have ranged from 70% to 90% (Barlow & Hersen, 1984).

**Treatment Integrity**

An independent observer recorded the data on the proper implementation of the self-evaluation of the video tape for each subject.

Table 1

*Interobserver Agreement for Each Subject.*

|  | Subject 1 | Subject 2 | Subject 3 |
|---|---|---|---|
| **Range** | 70% - 92% | 72% - 90% | 84% - 96% |
| **Mean** | 80% | 83% | 88% |

Treatment integrity was collected for a total of 6 sessions (25%) with each subject for treatment phase only.  Checklists containing the intervention procedures were used to determine treatment integrity (see Appendix A).  Treatment integrity was calculated as the number of steps correctly implemented divided by the total number of procedures possible and then multiplied by 100.

**Experimental Conditions and Procedures**

For Subject 1, conditions consisted of baseline (daily tracker only) and daily tracker plus video feedback.  Subjects 2 and 3 conditions consisted of baseline (daily tracker only, daily tracker plus video feedback, and follow-up.  As you will see in the results section, Subject 1 displayed inconsistent results throughout both phases of the intervention, so only two of the three phases were run with Subject 1.

**Participant Training**

Before beginning the baseline phase, the subjects were trained in two different

areas.  First, they received instruction from the facilitator about the target behaviors.

The target behaviors for Subject 1 and 2 were "following one step directions within 10

s" and for Subject 3 were "working independently."  The subjects were provided

examples of following one step directions and working independently.  The facilitator

also provided some examples, asking the subjects to differentiate desirable interactions

from undesirable ones.  For example, the facilitator would give the subject a scenario

such as "The reading para-professional asked you to sit in a different seat than you

usually do away from your friend.  You put your head on the table, began stomping your

feet, and refused to talk to anyone.  Is this the appropriate way to follow a teacher's

directions within 10 s?"  The subject would then respond with a "yes" or a "no" and

explain what the appropriate behavior would have been for that scenario.  The

facilitator would also conduct role plays with Subject 2 for working independently

similar to the role play mentioned above for following one step directions within 10 s.

Next, the participants and their regular education teachers were trained on how

to correctly fill out the daily tracker (see Appendices B and C).  This daily tracker is the

same daily tracker that the subjects had previously used, they were just asked to fill out

the tracker a bit differently than before the study began.  The daily tracker is a tool for

teachers, students, and parents to use to monitor specific behaviors that the student

may be exhibiting during class.  Before the study began, the subjects' teacher rated the

student's target behavior after each designated session.  The subject had no input on

the tracker for their target behaviors before the study began.  At the end of the day, the

student would take the tracker to the resource teacher and would receive a reward for attaining a determined percentage for that day.  The tracker would then go home for parents to see.  Some parents had set up a reward system for their child at home for meeting the determined percentage for the day.  Once the study began, the subjects were able to rate their target behaviors as well.  The students self-evaluated their behavior using a red pen after each activity session.  The regular education teacher then rated the students' behavior for that activity session using a black pen.

### Baseline (Daily Tracker)

Each session took place in the participants' regular education classroom or small group reading sessions within the regular education classroom with other non-disabled peers.  All sessions were videotaped and took place during group activities in reading and/or math while the subjects were working in a group to complete a task given by the teacher.  A digital recorder was placed in each subjects' classroom for approximately two weeks prior to the beginning of the study in an attempt to eliminate any participant reactivity.  During each group activity, the classroom teacher, special education teacher, and a para-professional were present but did not interfere with ongoing instruction.

Throughout the baseline phase, 20-min activity sessions were held in math or reading.  All of the students in the regular education classroom and their parents gave permission to participate in the research.  Hands-on activities (using fraction bars in math or reading groups in reading) were planned prior to each class.  Some of the

activities planned were small group (4 to 5 students) and some sessions were whole group activities in the classroom.

All sessions were supervised by a teacher and para-professional that provided instructions at the beginning of the activity and was available to answer questions. After each 20-min activity session, the subjects self-evaluated their behavior (with red pen) on the daily tracker (see Appendices B and C) in the area of following directions within 10 seconds (Subject 1 and 2) and working independently (Subject 3). Once the subjects self-evaluated the behavior, the teacher then evaluated the subjects' behavior during that session (with black pen). The daily tracker is designed to be a communication tool between the regular education teacher, special education teacher, and parents. At the end of the school day, the subjects brought the completed tracker to the facilitator to determine if a small reward has been earned. The subjects only received the point value (0, 1, or 2) that was agreed on by both the subjects and the teacher. If the subjects received 80% of points possible throughout the day, they received a small reinforcer. A preference assessment was completed on the subjects before beginning the study to determine appropriate reinforcers.

**Daily Tracker with Video Feedback**

During the video feedback phase, individual video feedback sessions were held before lunch or at the end of the school day for each subject. Feedback sessions were conducted by an adult facilitator. Videotape feedback sessions ranged in duration from

approximately 10 to 20 min.

During each of the daily video feedback sessions, the subjects viewed approximately 10 min of the videotape from the activity session held that day. Using the timer on the recording, the digital recording was stopped at 30 s intervals and the subjects were asked to respond to the statement, "I followed the teacher's directions within 10 s," or "I worked independently," with a "yes" or "no" response and recorded that response on a self-evaluation recording sheet (see Appendix D). "Yes" is to be marked only if the subjects followed teacher directions within 10 seconds or worked independently during the 30 s interval. If a "no" response is marked, the facilitator will ask the subject what else he could have done when the teacher gave a direction. Depending on the subjects' responses and the rates of undesirable interactions, this questioning may be faded within three or four days so that it occurs only once or twice per session (Kern-Dunlap et al., 1992). The facilitator was not able to fade questioning for Subject 1 and 3 which is explained further in the following paragraph. The questioning for Subject 2 was able to be faded quickly after beginning the videotape feedback stage.

The facilitator also viewed the digital recording with the subjects and also recorded the occurrences of following directions or working independently. Following each 30 s segment, the facilitator compared her responses to the subjects' responses. Feedback continued to be given every 30 s throughout the sessions for Subject 1 because he was not able to accurately answer the question "Did I follow teacher

directions within 10 s." Figure 2 in the Discussion section shows the inconsistencies between the teacher ratings and Subject 1 ratings of the behavior. Feedback was decreased for Subject 2 after only two sessions because of his consistent responses to the question "Did I follow teacher directions within 10 s." He was also able to recognize and verbally address appropriate and inappropriate behaviors throughout the session. Feedback continued to be given every 30 s throughout the sessions for Subject 3 because he had a difficult time answering the question "Did I work independently?"

During the video feedback phase, the subjects were awarded one point for following directions or working independently throughout each 30 s interval. In addition, they were awarded a point for accurately evaluating their behavior. If the subjects earned 80% or more of the points possible during a session, the points could be exchanged for a small reward (edibles, small toys, computer time, etc.) at the end of the feedback session.

### Follow-Up (Tracker only)

Subject 1 was not able to reach criterion for a consistent amount of time. It was determined that because Subject 1 was not able to understand the difference between following and not following teacher directions and there was such a discrepancy in the teacher and subject data, the research on this subject was terminated. There was no follow-up with this subject.

Once Subject 2 and 3 met criterion with the data, they continued onto follow-up. Follow-up conditions were identical to baseline conditions as described above. Throughout each phase of the research, Subject 2 and 3 were unable to reach stability. The facilitator and university professor decided that since the data showed improvement for an extended amount of time, Subject 2 and 3 could go to the follow-up stage. Similar to the previous phases, Subject 2 and 3 maintained criterion similar to the video feedback phase while continuing to have inconsistent stability throughout the phase.

**RESULTS**

**Subject 1**

The results for the dependent variables for Subject 1 are shown in Figure 1.

During baseline, the subject's following directions behavior ranged from 43% to 92%

with a mean of 62%.  The day the subject reached a 92% was a day with many preferred

activities for this subject.  The day the subject received a 43% was a Monday after

Thanksgiving Break.

After training and implementation of the treatment phase, the subject's

following directions behavior ranged from 21% to 100% with a mean of 76%.  As seen in

Figure 1, Subject 1 showed high variability and no consistency throughout the treatment

phase.  For this reason, the researcher decided to conclude the research with this

subject because it was not showing any consistent decrease in following direction

behaviors.  Although the mean of the treatment phase was higher than the mean of the

baseline phase, the researcher concluded that Subject 1's behaviors did not improve for

either an extended amount of time or to a significant degree during the treatment

phase.

Subject 1 is a third grade male that receives Special Education services under the

classification Emotional Disturbance.  He also exhibits many behaviors that are classified

as being on the Autism Spectrum. While watching the recording, Subject 1 would mark a

"yes" if he followed the direction at any point during the interval or if he knew that

eventually he followed the direction.  Figure 2 shows the percentages of Subject 1's behavior ratings compared to the percentages of the teacher's behavior ratings.  Subject 1's behavior ratings ranged from 88% to 100% with a mean of 97%, while the teacher's behavior ratings ranged from 21% to 100% with a mean of 71%.  Thus, his ratings of his own behavior did not correspond to the ratings made by the teacher. The researcher also considered this data when deciding to conclude the research with Subject 1.

**Subject 2**

The results for the dependent variables for Subject 2 are shown in Figure 1. During baseline, the subject's following directions behavior ranged from 17% to 78% with a mean of 51%.  The day the subject received a 17% was a day that he had to be removed from his regular education class and placed in the resource room to complete his daily work.  He was placed in the resource room because this student has a behavior plan which specifies that the regular education teacher follow a level system to give the student opportunities to follow directions.  If this student reaches the third level of this system, he is placed in the resource room until lunch to complete his work. After training and implementation of the treatment phase, the subject's following directions behavior ranged from 56% to 86% with a mean of 68%.  As seen in Figure 2, Subject 2 showed high variability with little consistency, but his daily percentages remained higher than during baseline.  Once Subject 2 reached stability within a range between 60% and 75% he was moved into the follow-up phase by removing the video

monitoring.  During the follow-up phase, Subject 2's following directions behavior

ranged from 25% to 93% with a mean of 70%.

Subject 2 is a fifth grade male that receives Special Education services under the

classification Emotional Disturbance.  He is academically on grade level with his peers

with a low average reading fluency rate.  He is able to understand and analyze his

behaviors as he watched them on a recording.  As we were watching the recordings, he

would talk to himself about what direction he did not follow and what it looked like to

be following the direction.  Although Subject 2 could understand and analyze his

behaviors, he was not motivated to increase his following direction behaviors.  The

researcher had to constantly make sure he and his teacher were completing the tracker

during each phase.

**Subject 3**

The results for the dependent variables for Subject 3 are shown in Figure 1.

During baseline, the subject's working independently behaviors ranged from 50% to

93% with a mean of 61%.  During the baseline phase, this student was battling some

anxieties about coming to school and leaving his mother.  His daily percentages started

off at 50% for 3 days then began to increase after the anxieties were addressed by the

school and his parents.

After training and implementation of the treatment phase, the subject's working

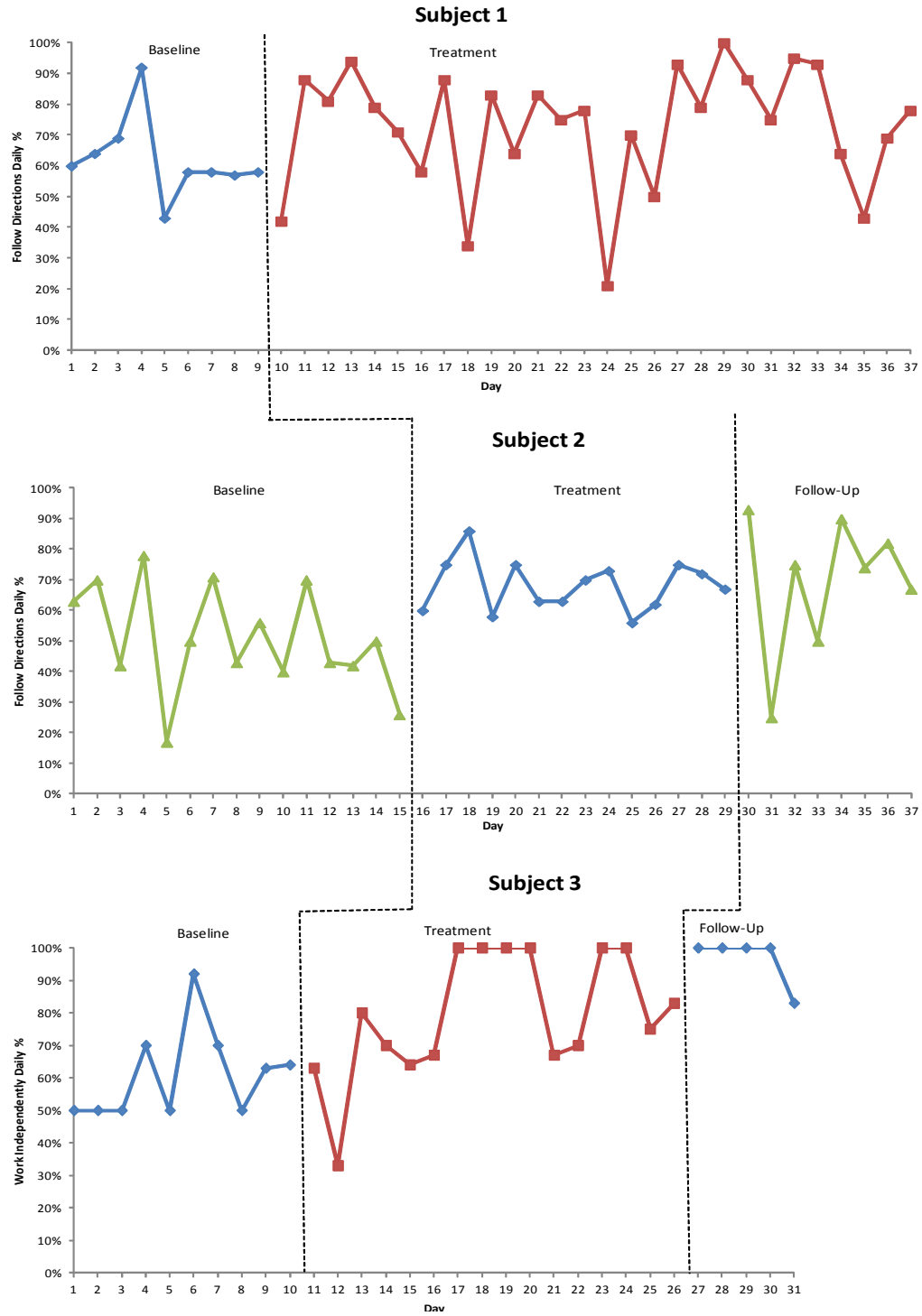independently behaviors ranged from 33% to 100% with a mean of 80%.  As seen in

*Figure 1.* Multiple Baseline graph of Subject 1 & 2 for following directions within 10 s and subject 3 for working independently.

Figure 1, Subject 3 showed high variability with some consistency. During treatment phase, Subject 3 received multiple "perfect" days with one low outlier in the data. Once Subject 3 reached stability within a range between 75% and 100% and earning multiple 100% data points consistently, he was moved into the follow-up phase by removing the video monitoring. During the follow-up phase, Subject 3's working independently behaviors ranged from 83% to 100% with a mean of 97%.

Subject 3 is a third grade male that receives Special Education services under the classification Specific Learning Disability. He receives Special Education services in reading and math. He was able to understand and analyze his behaviors as he watched them on a recording. Subject 3 would deliberate over his behaviors longer than the other two subjects he was able to identify whether or not he was working independently during the 30 s interval. Once this subject realized what his behaviors looked like on the recording he was able to decrease the behaviors significantly in his regular education classes.

# DISCUSSION

The results of each of these subjects show that the use of a digital recording feedback program can produce modest increases in following directions and working independently behaviors in regular education classrooms of used with students identified with behavioral concerns.  Subject 1 was unable to identify the dependent variable while watching the recording as well as during his regular education class.  As previously mentioned in the Results section, Subject 1 would self-evaluate his following directions behavior as significantly higher than the teacher rating.  Given more explicit instruction and consistent practice on what following one step directions within 10 s means, this student may also have shown increased instances of the target behavior.
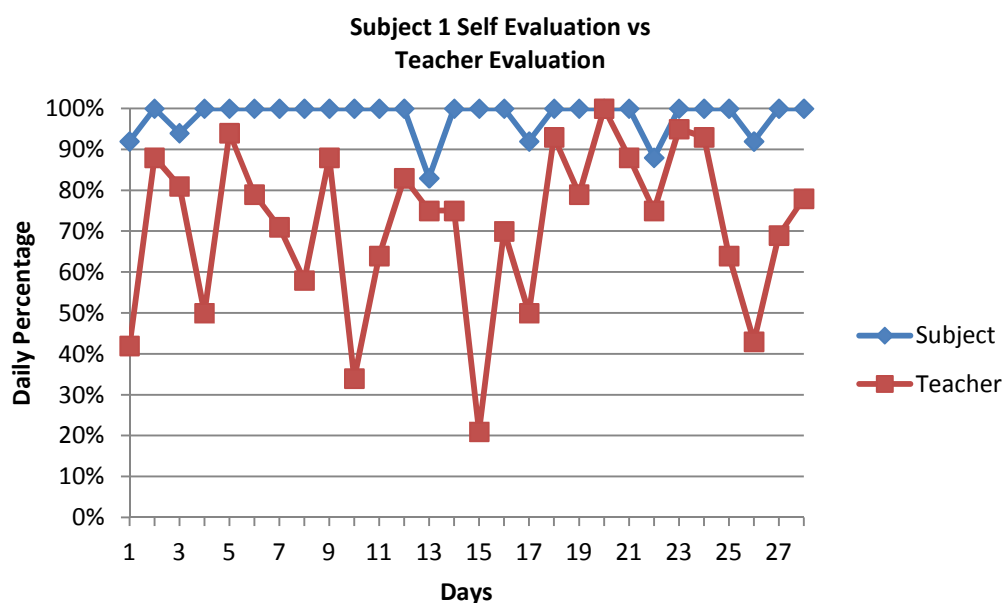


Figure 2. Shows Subject 1 self-evaluation daily percentages compared to teacher daily percentages for following directions within 10 s.

In past research, the videotape feedback program was used in classrooms that were designated for students identified as having an Emotional Disturbance classification.  In many schools, these classrooms are not available for these students.  The trend of Special Education is heading back into the regular education classrooms with academic and behavioral supports given by the Special Education department.  All students need to be able to function in a regular education classroom and allow the teacher to teach and the students to learn without being interrupted by inappropriate behaviors.  This study showed that for some, not all, students with behavioral concerns, a digital recording feedback program can be effective to increase target behaviors.

One limitation of this study was the uncontrolled environment of the regular education classroom.  Every teacher and para-professional has different tolerance levels when it comes to working with students with behavioral concerns.  Some classroom teachers have a higher tolerance for what other teachers would consider inappropriate behaviors.  It was difficult for the researcher to try and change those behaviors over a three month period.

One additional concern was the lower interobserver reliability percentage of 84%.  Although this percentage falls within the recommended range, it may be considered low due to the different tolerance levels of the primary observer and the para-professional trained to do the observations.  The primary observer (researcher) has very low tolerances for the dependent variables identified for each subject while the

para-professional was trained on how to conduct the observations, it is known that her tolerances for the dependent variables is higher than the researcher's.

Taking into consideration the limitations of this study, several conclusions may be drawn. First, to determine whether or not self-evaluation of a recording is effective with students' with behavioral concerns, there should be more subjects participating in the study. In the current research, each subject as well as each of their classmates had to give permission to be recorded either visually or verbally. The researcher was unable to gain permission from one indirect participant in a regular education classroom in which would have included two direct participants. Therefore, only three subjects met the criterion for the study.

Next, the researcher in this study is also the Resource teacher at that elementary school. All teachers and para-professionals have many teaching responsibilities during the regular school day. To add the responsibility of coordinating activities with the regular education teachers, completing behavior observations, participating in the viewing of the recordings, and training the classroom teacher and students could have contributed to the inconsistency and variability of the subjects' data. In future research it would be most beneficial to train undergraduate or graduate students to conduct the trainings, observations, and viewing the recordings to possibly ensure more consistent subject data. Although it was difficult for the researcher to administer the training and treatment for this program on a daily basis, it is definitely possible for a teacher to develop a schedule for training and treatment with multiple subjects and maintain a

program similar to this study.  For the majority of students that exhibit behavioral

concerns in schools, administering a digital recording program two to three times

weekly could decrease target behaviors.  To make the greatest impact on the target

behaviors, the program would need to be scheduled into the students' daily schedule

and followed with consistency and fidelity.

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**APPENDICES**

**Appendix A**

**Treatment Schedule**

1. Subjects will pick up tracker from the researcher each morning.
2. After each session, each subject (using red pen) and teacher (using black pen) will rate the subject's behavior based on criteria for following directions.
3. Subjects will be digitally recorded for the first 10 minutes of either his math or reading lesson.
4. Subjects will be observed by researcher for the first 10 minutes of the designated lesson.
5. At 2:45 p.m. the subject will bring his tracker to the researcher to determine his percentage for following directions throughout the day.
6. After his tracker has been totaled, he will watch the 10 minute video and circle "yes" if he followed all given directions within 10 seconds or worked independently for the entire 30 second interval.
7. The subject and researcher will watch the video together while stopping every 30 seconds to determine if target behaviors were exhibited during each interval. Feedback will be given at the end of each interval reinforcing replacement behaviors and identifying target behaviors.
8. The subject's self-evaluation tracker will be scored according to criteria.
   a. Each interval:  "Yes" = 1 point
                      Matching teacher = 1 point
      20 intervals at 2 points possible for each interval
      40 points possible = 80% of 40 = 32 points to receive chosen reward

**Appendix B**

**Daily Tracker for Subject 1 and 2**

Cougar Tracks!!

*We Expect Your Best!*

Student_____                    Date_____

| 0= Less than half time<br>1= Most of the time<br>2= All of the time | **Be Responsible**<br>Follow one step<br>directions within 10 s | Teacher<br>Initials |
|---|---|---|
| Reading | 0   1   2 | |
| Math | 0   1   2 | |
| Reading Groups | 0   1   2 | |
| Total Points: _____ pts.<br>Points Possible: __6__pts. | Today's %: _____<br>Goal %: __80% | |

Parent Signature: _____

**Appendix C**

**Daily Tracker for Subject 3**

# Cougar Tracks!!

*We Expect Your Best!*

Student_____          Date_____

| 0= Less than half time<br>1= Most of the time<br>2= All of the time | **Be Responsible**<br>Work independently | Teacher<br>Initials |
|---|---|---|
| Reading | 0   1   2 | |
| Math | 0   1   2 | |
| Reading Groups | 0   1   2 | |
| Total Points: _____ pts.<br>Points Possible: __6__ pts. | Today's %: _____<br>Goal %: __80%__ | |

Parent Signature: _____

**Appendix D**

**Digital Video Self-Evaluation Tracker**

**Subject: _____      Date: _____**

**"I followed directions within 10 s" or "I worked independently"      (Yes or No)**

| Interval 1 | Interval 2 | Interval 3 | Interval 4 | Interval 5 | Interval 6 | Interval 7 | Interval 8 | Interval 9 | Interval 10 |
|---|---|---|---|---|---|---|---|---|---|
| Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N |
| Interval 11 | Interval 12 | Interval 13 | Interval 14 | Interval 15 | Interval 16 | Interval 17 | Interval 18 | Interval 19 | Interval 20 |
| Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N |
| Interval 21 | Interval 22 | Interval 23 | Interval 24 | Interval 25 | Interval 26 | Interval 27 | Interval 28 | Interval 29 | Interval 30 |
| Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N | Y or N |