

# Using iKidTools™ Software Support Systems to Develop and Implement Self-Monitoring Interventions

Angela L. Patti  
*Ripley Central School*  
Kevin J. Miller  
*Buffalo State College*

## Abstract

Educational teams often are faced with the task of developing and implementing Behavioral Intervention Plans (BIPs) for students who present challenging and/or disruptive behaviors. This article describes the steps used to develop and implement a self-monitoring BIP that incorporated an innovative software system, iKidTools™. An authentic case study is described and easy-to-follow steps for carrying out similar interventions in inclusive settings are provided.

Jordan, a 13-year old mixed race (Caucasian/Hispanic) 7<sup>th</sup> grade student attending a rural school in the northeastern U.S. frequently shouted out in class, sometimes relevant information but more often off-topic and irrelevant information. He habitually made inappropriate comments or noises and his repertoire of behaviors included drumming on his desk, humming, and singing. Jordan also poked, pinched, and hit classmates. Often, he wandered around the classroom at his leisure and conversed with other students, distracting them from their learning. In the views of many in the school, Jordan was too disruptive and not a good fit for the inclusive classroom setting where he was receiving special education services as a student with a learning disability. In response to the behaviors Jordan exhibited, a functional behavioral assessment (FBA) was conducted, followed by the development and implementation of a behavioral intervention plan (BIP).

Developing BIPs is a common course of action for students who pose behavioral difficulties in general and special education settings. BIPs are designed to decrease a student's undesirable behaviors and increase desirable behaviors. This is particularly true when the disruptive behaviors impede the learning of the student(s) exhibiting these behaviors, as well as the other students in the class. In fact, the Individuals with Disabilities Education Improvement Act (IDEIA, 2004) requires the use of positive behavioral interventions in response to student behaviors that impede the learning process. Self-monitoring interventions that incorporate self-recording of target behaviors are recommended as best practices in the

area of positive behavioral intervention (Frey & George-Nichols, 2003; Lewis, Hudson, Richter, & Johnson, 2004; Menzies, Lane, & Lee, 2009; Sheffield & Waller, 2010).

## Self-monitoring

Self-monitoring is one of several strategies that fall under the broader category of self-management, or self-regulation (Frey & George-Nichols, 2003; Johnson & Johnson, 1999; Lewis et al., 2004; McConnell, 1999). In general, these strategies encourage students to take responsibility for managing their own behavioral and/or academic performance. In particular, self-monitoring interventions typically require a student to attend to and self-record his or her own performance on a target behavior based on pre-determined definitions and criteria (Amato-Zech, Hoff, Doepke, 2006; Daly & Ranalli, 2003; Johnson & Johnson, 1999; Rafferty, 2010).

Studies show that students can successfully learn to use and benefit from self-monitoring interventions that incorporate some form of self-recording of behavior. The many benefits of using self-monitoring with self-recording procedures are noted in the professional literature (Anderson, Fisher, Marchant, Young, Smith, 2006; Harris, Friedlander, Saddler, Frizzelle, & Graham, 2005; Miller, Fitzgerald, Koury, Mitchem, & Hollingsead, 2007; Mooney, Ryan, Uhing, Reid, & Epstein, 2005; Rafferty & Raimondi, 2010; Reid, Trout, & Schartz, 2005, Whitby & Miller, 2009). The following list enumerates some of the observed and suggested benefits:

## Author Note:

Address all correspondence to Kevin J. Miller (millerkj@buffalostate.edu).

1. Self-monitoring procedures are ecologically less intrusive than many other interventions; they are easy to use and do not require a lot of curricular modification (Amato-Zech et al., 2006; Wilkinson, 2005).
2. Self-monitoring procedures require less teacher time and attention than many other types of intervention procedures (Amato-Zech et al., 2006; Johnson & Johnson, 1999).
3. Self-recording procedures can be used with a wide variety of target behaviors (Johnson & Johnson, 1999; Sheffield & Waller, 2010).
4. Self-monitoring procedures can be used with students from pre-school through high school levels, and their effectiveness has been demonstrated with a variety of disability groups (Amato-Zech et al., 2006; Lewis et al., 2004; Sheffield & Waller, 2010).
5. Self-monitoring procedures provide students with skills, which have life-long benefits; students learn to be self-reliant and more responsible for their own actions (Daly & Ranalli, 2003; Johnson & Johnson, 1999; Sheffield & Waller, 2010; Wilkinson, 2008).
6. Self-monitoring procedures have the potential to promote maintenance and generalization of desired levels of behavior (Amato-Zech et al., 2006; Lewis et al., 2004).
7. Self-monitoring procedures can help students be successful within inclusive classrooms (McConnell, 1999).
8. Self-monitoring procedures are highly acceptable to the students who use them; students actually seem to enjoy using self-management procedures (Daly & Ranalli, 2003).

In the current article, the use of iKidtools™ is presented as a practical and promising practice within the implementation of a positive behavior intervention plan designed to address students who display challenging behaviors. The specific steps used to develop and implement a self-monitoring BIP, which incorporated the innovative software system iKidTools™, are described. The delineated steps provide practitioners an explicit guide for designing similar self-monitoring interventions using the iKidTools™ software.

### **iKidTools™**

iKidTools™ is an electronic performance software system (EPSS) comprised of 16 research-based tools for elementary and middle school children (Miller et al., 2007). This software can be downloaded for free from <http://kidtools.org>. The software and printable electronic tools are designed to help children gain

control over behaviors that are problematic at school and/or at home (Miller et al.).

iKidTools™ contains electronic tool templates that can be used to create self-monitoring cards to self-manage and self-record personal performance. Examples of the self-monitoring cards found within the iKidTools™ program are point cards, countoons, and S.T.A.R. cards. The iKidTools™ point cards are a series of electronic templates from which teachers and students can create developmentally and age-appropriate self-monitoring cards that are tailored to meet the needs of a student. The created point cards serve as a collection device that a teacher or student can use to record points for positive behavior exhibited over time. A countoon is a “cartoon that counts.” It is a blend of a self-monitoring procedure with a point card. The card is designed with simple graphics to provide a visual reminder of the desired behavior. The student uses the countoon card to record a tally or count for the occurrence of the desired behavior as well as to display positive consequences that can be earned.

The S.T.A.R. card strategy is a simple, cognitive behavioral modification procedure for social problem solving. It is designed as a self-monitoring procedure in which students are instructed to observe and record their own behaviors. The acronym S.T.A.R. stands for four steps to help students make a plan to take control of their behavior. The four steps are STOP, THINK, ACT, and RESULTS. The purpose of the STOP step is to help students learn “stop signals” to get them to stop before acting impulsively. The next step, THINK, helps students to become cognitive and reflective about their actions and use positive thinking as a means to gain control of their behaviors. The purpose of the ACT step is to teach new behaviors and obtain feedback as a means to continually refine the new and improved behaviors. The RESULT step is used by students to evaluate the outcomes of their actions.

### **Steps for Successful Implementation of a Self-Monitoring Behavior Intervention Program Incorporating iKidTools™**

In this section, we articulate five steps for designing and implementing a self-monitoring behavior intervention program that incorporates iKidTools™. Following the explanation of each step is a narrative that describes the procedures used with our case study student, Jordan.

#### *Step 1: Identification of Problem Behaviors*

The first step in the process requires that a behavior(s) of concern is identified with the student.

For a self-monitoring procedure to work, the student (i.e., Jordan) must recognize the problem and be able to describe the behavior. The student also must be motivated to change his or her behavior.

In Jordan's case, the first author sat down with him to discuss problem behaviors and the consequences he was experiencing. Jordan was often yelled at for behaviors, sent to the office, and otherwise reprimanded. He was asked why he thought he was experiencing so much difficulty in the classroom. Jordan identified and described several behaviors he thought were causing him difficulty. The behaviors he identified included bothering classmates, shouting out in class, making noises in class, and not paying attention. The first author then questioned Jordan about how he felt about getting in trouble so often. During the conversation, Jordan stated that he wanted to be successful in school and wanted help getting control over his behavior.

**Step 2: Introduction to KidTools**

Once the problem is identified, the next step involves securing an agreement with the student to become invested in efforts to change the behavior.

During this process, the iKidtools™ software can be introduced to the student. This step should involve providing an overview of the software and time for the student to explore the various tools available in iKidTools™.

The first author introduced the iKidTools™ software program to Jordan and explained how the tools might be used to help him better manage his behavior. This was followed by a brief overview and demonstration of iKidTools™. Next, the first author provided Jordan with a 30-min. session to freely navigate and explore the software. During this process, he became excited about using the software program.

**Step 3: Selection and Creation of a Tool**

In the third step, the teacher and student worked together to select and complete an appropriate tool template. To promote ownership, the student should be made responsible for phrasing the words and typing the information into the selected iKidTools™ template. To input the information, the student clicks on "hot words" or "hot boxes" and enters personalized information. The completed tool is printed for use.

Figure 1.

Jordan's Period Point Card Template (Printed with permission from Gail Fitzgerald).

**iKidTools**

File Tools

Click on the red numbers to name your behaviors.

Behaviors	Class Periods							
	1	2	3	4	5	6	7	8
1. Raising my hand to talk								
2. Keep hands quiet								
3. Following directions								
4. Being mature								
5. Paying attention								
<b>TOTALS</b>								

See Example Start Over Name: Jordan A Date: 6/19/2008 Print Exit

Jordan chose to use a Period Point Card (see Figure 1) to address the similar difficulties he was experiencing in all of his classes. The Period Point Card allowed him to self-monitor the same problem behaviors throughout the school day. With some guidance from his teacher, Jordan selected target behaviors to improve, phrased them in his own words, and typed them into the template. He chose to include positive behaviors he wanted to increase, as opposed to negative behaviors that he no longer desired to display. Jordan then printed the completed Period Point Card.

#### *Step 4: Determining How to Use iKidTools™*

Step four requires that the teacher and student work together to determine exactly how they will implement the developed self-monitoring system. They select the tool within iKidTools™ to use and collectively decide how frequently the student will record his or her behavior. The student, if necessary, is provided guided instruction on how and when to self-monitor using the created iKidTools™ tool. The reinforcers and criteria for earning them are identified. For a student who is in numerous classrooms, a meeting with all his or her teachers should be scheduled to discuss the entire behavior intervention plan.

With Jordan, it was determined that, at the end of each class period, he would record a plus or minus next to each behavior on his Period Point Card. Jordan recorded a plus when he thought he exhibited the designated positive target behavior for most of the class period; if he did not, he recorded a minus. At the end of each class session, he then showed the card to his classroom teacher (either the general education or special education teacher). Jordan and the teacher discussed and modified any discrepancies between their respective perceptions of the behavior.

Jordan and his teacher created a list of reinforcers to earn when he exhibited the positive behaviors. With Jordan's input, a point value was assigned to each reinforcer.

Since Jordan attended classes with a number of different teachers throughout the day, a team meeting with all of his teachers was held to describe the system. The brief meeting with Jordan's educational team allowed for relevant information to be shared and discussed. At the meeting, the purpose of the intervention, the rationale for the intervention, the rationale for incorporating iKidTools™, how it was to be implemented, and specifically, the role each team member was expected to play were clarified.

#### *Step 5: Implementation and Monitoring of the Intervention*

The fifth step in the process is the formal implementation and monitoring of the intervention

and its impact on the targeted behavior. This occurs after the teachers and student are well-versed with the intervention and procedures for implementing the selected iKidTools™ tool. The student self-monitors his or her own progress, and the teacher monitors the student's performance. A teacher and the student meet daily to discuss the student's behavior and determine the reinforcers earned.

After the teachers' team meeting with Jordan, he and the first author reviewed the intervention plan and procedures for using the Period Point Card. The implementation began the following day. At the end of each day, Jordan met with his special education teacher to review his Period Point Card, tally up the points earned for the day, exchange them for reinforcers, and discuss his performance. He then plotted the total points earned each day on a graph. This provided Jordan and his team of educators with a visual representation of his progress.

#### **Impact of Intervention**

Jordan and all involved teachers noted an immediate and marked change in behavior. As soon as the plan was in place, Jordan's behavior improved; he was shouting out less, making fewer noises in class, paying better attention, interacting more appropriately with his peers, and, as a whole, behaving in a more positive manner. Jordan's behavior became much more manageable, and he was able to participate in the general education classroom in a positive manner for the remainder of the school year. At team meetings, Jordan's teachers commended his good behavior and attributed the change to the iKidTools™ intervention. The teachers also agreed the intervention was effective, easy to implement, and unobtrusive to routine classroom practices.

Jordan felt the intervention helped him behave more appropriately. He enjoyed using the iKidTools™ intervention and was pleased with his progress. The iKidTools™ program allowed Jordan a high level of control over his intervention. He actually designed the intervention himself by choosing the behaviors he wanted to improve, selecting a template, and designing the template. In each of these steps, Jordan had control over his intervention, resulting in a sense of ownership and "buy-in," or acceptance, of the intervention. In addition, the iKidTools™ program allowed Jordan to utilize the computer, a preferred activity for him.

The intervention required Jordan to self-monitor his behavior. This made him more aware of his behavior. When meeting at the end of the day, Jordan often commented on why he had earned certain pluses and minuses in a particular class and how he might adjust his behavior accordingly. Also, when Jordan graphed his total points for the day, he

frequently made comments such as, "Today was a good day; I worked very hard," or "Today was not such a good day; I need to work harder tomorrow." Finally, for Jordan, the use of reinforcers helped increase his desire to improve his behavior.

## **Final Thoughts**

From our experience, iKidTools™ is easy to use and can be adapted to a variety of situations. The iKidTools™ software system can be incorporated into an array of behavior intervention plans with a wide range of students exhibiting a wide variety of problem behaviors. Though each unique situation will warrant a unique application of the iKidTools™ software, steps, along with the tips presented in Figure 2, offer a framework for using the software to create a self-monitoring BIP.

By supporting the development of self-monitoring BIPs, the iKidTools™ software may assist educators in facilitating the inclusion of students with disabilities who exhibit challenging behaviors in general education classrooms. Effectively, this would enable students to realize a number of behavioral, social, and academic benefits.

While the information shared from Jordan's case study was limited to teacher observations and perceptions of benefit, his behavioral improvements appear to support iKidTools™ as a promising software intervention tool that can serve as a foundation for creating and implementing self-monitoring behavior intervention plans. We caution, however, that additional research remains needed to verify this assertion.

---

### **Figure 2. Steps and Tips for Using iKidTools**

---

#### **How to Create a Self-Monitoring Program with iKidTools**

---

##### *Step 1: Identification of Problem Behaviors*

- Discuss problem behaviors with student
- Identify specific, measurable behaviors to monitor
- Gain student's buy-in for working on the problem

##### *Step 2: Introduction to iKidTools*

- Provide the student with an overview of the software
- Allow the student time to explore the software

##### *Step 3: Selection and Creation of a Tool*

- Allow the student to select a tool
- Allow the student to create the tool using the provided template (providing guidance only as necessary)

##### *Step 4: Determining How to Use iKidTools*

- Discuss all of the details of the intervention with the student (how the tool will be used, when it will be used, rewards, consequences, etc.)
- Provide intervention information to all involved parties

##### *Step 5: Implementation and Monitoring of the Intervention*

- Implement the intervention as planned
  - Allow the student to track his/her performance by charting or graphing the results
  - Modify the intervention as necessary
-

## References

- Amato-Zech, N. A., Hoff, K. E., & Doepke, K. J. (2006). Increasing on-task behavior in the classroom: Extension of self-monitoring strategies. *Psychology in the Schools, 43*(2), 211-221.
- Anderson, D.H., Fisher, A., Marchant, M., Young, K.R., & Smith, J.A. (2006). The cool card intervention: A positive support strategy for managing anger. *Beyond Behavior, 16*, 3-13.
- Daly, P. M., & Ranalli, P. (2003). Using countoons to teach self-monitoring skills. *Teaching Exceptional Children, 35*(5), 30-35.
- Frey, A. & George-Nichols, N. (2003). Intervention practices for students with emotional and behavioral disorders: Using research to inform school social work practice. *Children and Schools, 25*(2), 97-104.
- Harris, K.R., Friedlander, B.D., Saddler, B., Frizzelle, & Graham, S. (2005). Self-monitoring of attention versus self-monitoring of academic performance: Effects amount students with ADHD in the general education classroom. *The Journal of Special Education, 39*, 145-156.
- Individuals with Disabilities Education Improvement Act of 2004, Pub. L. No. 108-446.
- Johnson, L. R., & Johnson, C. E. (1999). Teaching students to regulate their own behavior. *Teaching Exceptional Children, 31*(4), 6-10.
- Lewis, T. J., Hudson, S., Richter, M., & Johnson, N. (2004). Scientifically supported practices in emotional and behavioral disorders: A proposed approach and brief review of current practices. *Behavioral Disorders, 29*(3), 247-259.
- McConnell, M. E. (1999). Self-monitoring, cueing, recording, and managing: Teaching students to manage their own behavior. *Teaching Exceptional Children, 32*(2), 14-21.
- Menzies, H. M., Lane, K. L., & Lee, J. M. (2009). Self-monitoring strategies for use in the classroom: A promising practice to support productive behavior for students with emotional and behavioral disorders. *Beyond Behavior, 18*(2), 27-35.
- Miller, K. J., Fitzgerald, G. E., Koury, K. A., Mitchem, K. J., & Hollingshead, C. (2007). KidTools: Self-management, problem-solving, organization, and planning software for children and teachers. *Intervention in School and Clinic, 43*(1), 12-19.
- Mooney, P., Ryan, J.B., Uhing, B.M., Reid, R., & Epstein, M.H. (2005). A review of self-management interventions targeting academic outcomes for students with emotional and behavioral disorders. *Journal of Behavioral Education, 14*, 203-221.
- Rafferty, L.A. (2010). Step-by-step: Teaching students to self-monitor. *Teaching Exceptional Children, 43*, 50-58.
- Rafferty, L.A., & Raimondi, S. L. (2010). Self-monitoring of attention versus self-monitoring of performance: Examining the differential effects among students with emotional disturbance engaged in independent math practice. *Journal of Behavioral Education, 18*, 279-299.
- Reid, R., Trout, A.L., & Schartz, M. (2005). Self-regulation interventions of children with attention deficit/hyperactivity disorder. *Exceptional Children, 71*, 361-367.
- Sheffield, K., & Waller, R. J. (2010). A review of single-case studies utilizing self-monitoring interventions to reduce problem classroom behaviors. *Beyond Behavior, 19*(2), 7-13.
- Whitby, P., & Miller, K. J. (2009). Using eKidtools software tools to provide behavior support in general education settings. *TEACHING Exceptional Children Plus, 5*(3) Article 5. Retrieved [August 2, 2011] from <http://journals.ccc.sped.org/tcplus/vol5/iss3/>
- Wilkinson, L. A. (2005). Supporting the inclusion of students with emotional and behavioural disorders: Examples using conjoint behavioural consultation and self-management. *The International Journal of Special Education, 20*(2), 73-84.

Copyright of Rural Special Education Quarterly is the property of ACRES and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.