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Students' Perspectives of Self-Monitoring and Self-Assessment

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CERTIFICATE OF APPROVAL

This is to certify that the Action Research Project of

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Abstract

The purpose of the study was to examine the impact that self-monitoring and self-assessment had on students' perspectives regarding their classroom experience. Classroom teachers are faced with the task of guiding students towards increasing their independence with academic tasks and classroom behavior on a daily basis. Many teachers also seek solutions to help increase students' motivation and self-regulation skills. Self-monitoring and student self-assessment strategies are both examples of positive behavior interventions that are considered to be evidence-based strategies. These strategies can be used to help support students in increasing positive classroom behavior and decreasing negative or undesirable behavior. A considerable number of studies have been conducted on self-monitoring and self-assessment and the impact such self-management tools have on academic accuracy, classroom behavior, and productivity. This study examined five students' perspectives on self-monitoring and self-assessment strategies using qualitative methods.

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Chapter 1

Introduction

It's the end of the day in a 3rd-5th grade classroom. Students are stacking chairs, packing backpacks, and getting ready to go home. Lockers are slamming shut and students are visiting with each other in the classroom. One student rushes into the classroom and pulls a graph out of his desk. He taps a pencil across a page of paper, counting arrows that he had marked throughout the day.

"Ms. Erica, can you double check how many 'arrows up' I had today?" Justin is recording data on his own behavior goals. After recounting his arrows, I let him know that I had counted 48 "arrows up." At that moment, he hops out of his chair and shouts, "I did it! I made it to my 40's!" Justin jumps up and down. He has a huge smile on his face. He dances around the classroom, shouting "Yes! I did it! Yes!" Then, he comes back to his desk and colors in a column on his graph with a colored pencil. He stares down at his chart, smiling, then points to data he had recorded a few days before. The graph indicates that he had earned 25 "arrows up" that day. Justin points out, "Back then I got 20's, but I know I can get 40's. 20's aren't so great, but 40's are great!" Justin is one of six students in my class that uses self-monitoring and assessment tools to monitor his performance of classroom skills/behavior. Each student's self-monitoring tool is individualized based on their own goals. The mission: to put students in the driver's seat of their own learning.

The school where I teach is a charter school in a large city in the midwest that focuses on providing individualized education programs for students of all backgrounds and abilities. I teach grades 3-5 in a setting 2 special education classroom, which means that my students spend 20-60% of their day receiving specialized instruction in my classroom and the remainder of their day is spent in a general education setting with same-aged peers. I have 6 students in my class and two paraprofessionals who provide additional support for students.

The students that I work with are all labeled as having autism spectrum disorder and are impacted by their disability at greatly varying levels. Some students also have a cognitive disability and all of my students have a secondary disability of a speech/language impairment. Students' needs vary academically, behaviorally, and socially, and the special education services they receive through our program provide them with tools and specialized instruction to meet their needs in all three of these areas. Students are making progress in my class, however, I am always looking for ways to improve my practice.

Purpose Statement

The purpose of this study was to better understand the impact that self-monitoring and self-assessment tools have on students' perspectives regarding their classroom experience. Throughout the study, students used self-monitoring and assessment tools to take ownership of their classroom behavior, attention to task, and progress towards their math and literacy goals. Data was gathered through participant observations and interviews of five students pertaining to how

they feel about their progress and how self-monitoring and assessment impacts their self-images as learners. The students I observed and interviewed all attend my class for center-based reading and math instruction. These students are all on my caseload and each student has an individualized education program (IEP).

The students in my class need support to increase desired classroom behavior, attention to task, and academic accuracy. Without this support, students would miss out on academic instruction and opportunities for growth for a number of reasons. Some students tend to give up easily or lose interest if they make mistakes. Other students may rush through their work without trying their best. Several of the students in my class are working on self-regulation and coping strategies to be successful in the classroom. This poses several questions to me as a teacher. How do the students view themselves as readers/learners? What steps can I take to increase student engagement? How do self-monitoring and self-assessment strategies impact students' feelings about their learning and classroom environment?

Importance of the Study

According to Patti & Miller, "the Individuals with Disabilities Education Improvement Act (IDEIA, 2004) requires the use of positive behavior interventions in response to student behaviors that impede the learning process" (2011, p. 27). Given that students in my classroom sometimes display off-task behavior or a lack of engagement, it is my responsibility to take action through the use of positive behavior interventions.

This research will be valuable to me in my role as a special education teacher. The study could be helpful in planning for math and reading interventions and for developing strategies to increase on-task behavior in my classroom. The previous research, while valuable to me, is not specific to my classroom setting and my students' individual needs. My research will help me evaluate the impact these strategies have on students with autism spectrum disorder and inform my teaching practices.

Definition of Terms

Self-monitoring and student self-assessment are both examples of positive behavior interventions that fall into the broader category of self-management or self-regulation (Patti & Miller, 2011; Ganz, 2008). Positive behavior interventions are evidence-based strategies that can be used to help support students in increasing positive or favorable classroom behavior and decreasing negative or undesirable behavior (Patti & Miller, 2011). Positive behavior interventions and supports can be used at the school-wide level, and is often referred to as a school-wide PBIS plan (Coffey & Horner, 2012). In contrast, positive behavior interventions and supports can also be used on an individual level as part of a Behavior Intervention Plan (BIP) for students with disabilities (Patti & Miller, 2011).

The literature on self-monitoring describes the strategy as a basic two-step process in which students self-observe a specific, targeted behavior such as a learning goal and self-record data on the specific behavior being monitored

(Amato-Zech, Hoff, & Doepke, 2006; Joseph & Eveleigh, 2011; Lee, Palmer, & Wehmeyer, 2009; Reid, 1996). According to researcher Jennifer B. Ganz, "Self-monitoring encourages students to be conscious of their own specific behaviors, observe whether they occur, keep track of the occurrences of the behaviors, and reward themselves for improvements; this enables and encourages them to change those behaviors," (2011, p. 39).

In addition to self-monitoring, student self-assessment strategies will be discussed. Self-assessment is described as an ongoing process in which students monitor and evaluate their performance of a specific skill or behavior and identify strategies to enhance their performance (McMillan & Hearn, 2008). Self-assessment requires students to critically evaluate their work based on explicitly stated criteria, then reflect and make revisions based on their observations (Andrade & Du 2007).

Chapter 2

Review of Literature

A considerable number of studies have been conducted on self-monitoring and self-assessment and the impact such self-management tools have on academic accuracy, classroom behavior, and productivity. However, a limited number of studies exist related to student perspectives on such self-management interventions. Much of the research available addresses the benefits and potential pitfalls of self-monitoring and assessment interventions and describes specific tools or processes for implementing such interventions. Many of the studies reviewed examine the effectiveness of self-management interventions through quantitative research.

This chapter will examine some of the available literature in regards to the use of self-monitoring and self-assessment interventions and tools in an educational setting. The chapter will establish separate definitions of self-monitoring and self-assessment, and describe their historical importance to the field of education. In addition, it will examine the rationale for the use self-management interventions, along with steps for teacher implementation of self-monitoring and self-assessment interventions. Lastly, it will cover implications for the use of self-monitoring and self-assessment tools as educational interventions and discuss the future direction for self-monitoring and self-assessment strategies.

The relationship between self-monitoring and student self-assessment

While self-monitoring and self-assessment strategies both require students to examine their performance of a skill, the terms represent different strategies and should not be used interchangeably. Therefore, it is important to establish the difference between the two terms and define their relationship. As mentioned in the first chapter, self-monitoring is a basic two-step process which requires students to observe and record data on a specific behavior (Amato-Zech, Hoff, & Doepke, 2006; Joseph & Eveleigh, 2011; Lee, Palmer, & Wehmeyer, 2009; Reid, 1996). Self-assessment differs from self-monitoring; as self-assessment is an ongoing process in which students not only monitor their performance but also identify strategies to enhance their performance (McMillan & Hearn, 2008).

History of self-management strategies and intervention tools

Over the past 20 years, self-management strategies such as self-monitoring and self-assessment have become an increasingly popular alternative to teacher-managed interventions (Wilkinson, 2008). The literature reviewed reveals that self-monitoring and student self-assessment strategies have been used across educational settings and levels of study. Research indicates that self-monitoring strategies can be a useful tool for students with and without disabilities (Amato-Zech, Hoff, & Doepke, 2006). Studies have shown that self-management strategies can have a positive impact on students with autism spectrum disorder (Ganz, 2008; Holifield, Goodman, Hazelkorn, & Heflin, 2010; Rock, 2005; Wilkinson, 2008), attention deficit hyperactivity disorder (Ganz, 2008; Rafferty,

2010; Wilkinson, 2008), learning disabilities (Ganz, 2008; Reid, 1996; Wolfe, Heron, & Goddard, 2000), moderate cognitive disabilities (Ganz, 2008; Osborne, Kosiewicz, Crumley, & Lee, 1987), and behavioral disorders (Holifield, et al., 2010). Research also suggests that self-management strategies can be taught and used by students at different educational levels including preschool (Rafferty, 2010), elementary school (Rock, 2005; Wolfe, Heron, & Goddard, 2000), middle school (Joseph & Eveleigh, 2011), high school (Rafferty, 2010), and college (Andrade & Du 2007).

According to a study by Wolfe, Heron, & Goddard, "self-monitoring has historically been viewed as a critical component of child development and learning" (2000, p. 50). Self-monitoring is based on the cognitive-behavioral principle of reactivity, which suggests that self-recording data on specific behavior helps to increase one's awareness of the behavior and enables change to occur in regards to performance or occurrence of the specific behavior (McDougall, Morrison, & Awana, 2012). The use of self-management strategies is rooted in cognitive constructivist theory and ties in to Piaget's theory of constructivism (McMillan & Hearn, 2008). Cognitive constructivist theory suggests that students learn better when they are active participants of their construction of new knowledge, as opposed to the top-down model in which teachers simply offer information to be absorbed by a child (Harlow, Cummings, & Aberasturi, 2006). Guiding students toward developing self-management is a

critical component of a constructivist classroom (Bloom, Perlmutter, & Burrell, 1999).

Self-monitoring was originally used as a tool for conducting clinical assessments (Reid, 1996). The use of self-monitoring strategies dates back as far as 1965, in which researchers documented the effects of self-monitoring in therapeutic programs for the treatment of patients affected by mental illness (Kanfer, 1970). Research on the effectiveness of self-monitoring as an educational intervention was first published in the Journal of Applied Behavior Analysis in 1971, and investigations that examined the use of self-management strategies in conjunction with Applied Behavior Analysis continued into the mid-1970's (Reid, 1996). This research demonstrated the potential usefulness of self-monitoring tools in an educational setting.

Research expanded to include investigations determining the effectiveness of self-management strategies among students with special needs as early as 1980, with a study examining the effects of reinforcement schedules on attending to academic performance with adolescents with behavior disorders (Platt, 1980). Given the increasing popularity of self-monitoring tools, new products were designed to help decrease student dependence on teacher cues to self-monitor behavior. In 1987, teacher researchers Osborne, Kosiewicz, Crumley, & Lee, reported on the effectiveness of the use of audible cue systems to assist students with emotional/behavioral disorders and developmental or cognitive disabilities in self-monitoring productivity or "attention to task." This study

indicated that the use of audible cue systems was successful for four out of five special education students.

Over the past 20 years, new technology continued to be produced to aid in self-monitoring and self-assessment. In 2000 a new tactile cue system called the "MotivAider" was first introduced as an aid for self-monitoring. The "MotivAider" is a small device much like a pager, that buzzes in order to create a discrete cue to self-record behavior. The first study of the effects of this tool took place in 2006, which indicated that the use of the self-monitoring intervention led to increased levels of student engagement (Amato-Zech, Hoff, & Doepke, 2006).

In recent years, researchers have examined the impact of individualized self-management tools designed using a software called "iKidTools." In 2011, a study was conducted that demonstrated the benefits of using iKids Software Support Systems to develop and implement self-monitoring interventions in order to implement behavioral intervention plans (BIPs) for students receiving special education services (Patti & Miller, 2011). This study discussed the impact of "iKidTools" on decreasing undesirable behaviors and increasing desirable behaviors and found that the tools had a positive impact on behavior outcomes.

Rationale for the use of self-management tools

The literature on self-monitoring and self-assessment pinpoint how such strategies embody critical aspects of well known educational theories. Several of the sources reviewed examined how self-management strategies are rooted in the

concepts of cognitive and constructivist theories, metacognition theory, and self-efficacy theory.

Cognitive and constructivist theories suggest that students construct knowledge or make meaning of new information by self-assessing before and during learning, and connecting the new information to prior knowledge (McMillan, & Hearn, 2008). Self-assessment is a key component in cognitive and constructivist theories and self-management tools serve as a vehicle to be used to ensure that self-assessment occurs before, during, and after learning takes place. Accordingly, self-monitoring and self-assessment strategies are an example of cognitive and constructivist theories in action.

Metacognition involves thinking about one's thinking; and is an important component of cognitive development (Desautel, 2009). McMillan & Hearn's study demonstrates how self-management strategies require students to use and develop skills which involve metacognition, or "the capacity to monitor, evaluate, and know what to do to improve performance" (2008, p. 43). Researchers, Andandre and Du, also describe how the process of self-assessment embodies the steps of metacognition. By their definition, self-assessment involves each of these steps as students self-reflect and evaluate their work, identify strengths and weaknesses, and revise their work all as part of the self-assessment process (2007).

Self-efficacy refers to a student's self-perception or confidence in their ability to successfully complete a specific academic task (McMillan, & Hearn,

2008). According to Kobus, Maxwell, and Provo, "students with a low concept of self-efficacy tend to give up easily" (2008, p. 34). In order for students to improve their concept of self-efficacy, students need to be able to make accurate estimates of their ability to complete academic tasks. Self-monitoring increases students' awareness of their progress and what strategies work well for them. Author, Debra A. Bercher, described how self-monitoring can play a significant role in improving students' perception of self-efficacy. In her recent study from 2012, she revealed that the self-monitoring tool used in her study provided students with cognitive feedback and served as a guide for students to determine when to continue studying, when to adjust their use of study strategies, and when to recognize that a skill had been mastered (2012). Self-monitoring tools help students improve self-management skills and students that have strong self-management skills tend to have high levels of self-efficacy (Rafferty, 2010).

Purpose of Self-Monitoring and Self-Assessment Strategies

Self-monitoring and self-assessment strategies can be used to help students manage a number of social and academic behaviors. Typically, these strategies focus on one target behavior at a time (Rafferty, 2011). The literature suggests three key target behaviors that self-management interventions are used to manage. Of the literature reviewed, the majority of studies measured the impact of self-monitoring or self-assessment on academic accuracy, productivity, and classroom behavior. A number of sources indicate that self-management strategies increase academic accuracy (Holifield, et al. 2010; Joseph & Eveleigh, 2011;

Rafferty, 2010), productivity and task completion (Joseph & Eveleigh, 2011; McDougall, Morrison, & Awana, 2012; Rafferty, 2010), and have a positive impact on student behavior (Ganz, 2008; Holifield, et al. 2010; Morrison, & Awana, 2012; Patti & Miller, 2011).

Several of the studies indicated that self-management strategies such as self-monitoring and self-assessment can be used as a tool to monitor academic accuracy. In 2010, Council for Exceptional Children published an article by Lisa A. Rafferty that discusses the use of self-monitoring and graphing to improve academic accuracy. The author points out that students who graph their own behavior may begin to spontaneously set goals for themselves and monitor their own performance (Rafferty, 2010). Another study conducted by Holifield, Goodman, Hazelkorn, and Heflin revealed that two elementary students with autism demonstrated a significant increase in academic accuracy when compared to baseline data taken before the implementation of the strategy (2010). In a 2011 study published in the Journal of Special Education, students recorded on-task behavior and graphed academic accuracy while using task-specific strategies during reading. The data from this research indicated that these strategies were highly effective for students with ADHD and lead to increased academic accuracy (Joseph & Eveleigh, 2011).

Productivity is another common target behavior addressed by self-monitoring and self-assessment. The literature reviewed found positive outcomes on productivity as related to the use of self-monitoring and self-assessment

strategies. Self-monitoring of productivity involves measuring time spent on-task versus time spent off-task. Self-monitoring of productivity involves recording on-task or off-task behaviors at random time intervals spaced at least 90 seconds apart. According to Holifield, et. al, "self-monitoring provides an effective means for improving attending that may result in improved accuracy and productivity" (2010, p. 25). In a 2012 study on productivity or "independent task completion," authors McDougall, Morrison, and Awana found that task completion for one student raised from a mean of completing 21% of work assigned in a given time to a mean of 66%, while for another student the time required to complete assigned work decreased from a mean of 30 minutes to a mean of 11 minutes (p. 127).

In addition to the literature on the use of self-management strategies to manage academic accuracy and productivity, there is also a significant amount of literature available that examines the use of self-monitoring strategies as an intervention to manage behavior. According to Patti and Miller, "The Individuals with Disabilities Improvement Act (IDEIA) of 2004 requires teachers to use positive behavior interventions in response to student behaviors that impede the learning process" (2011, p. 27). Positive Behavior Interventions and Supports (PBIS) has become more widely spread as a schoolwide system to address disruptive or challenging behaviors. Self-monitoring is considered to be a best-practice intervention in the area of positive behavior intervention (Patti & Miller, 2011). Author, Jennifer B. Ganz, identifies several positive behavior impacts

associated with self-monitoring in students with ASD including improvements in

socially appropriate comments, responses to others, and completion of self-help

tasks. She also notes decreases in undesired behavior in response to the use of

self-monitoring, including decreases in echolalia, self-stimulatory behaviors, and

disruptive behaviors in individuals with ASD (Ganz, 2008). More recent research

results indicated that a combination of self-recording and graphing student

behavior may be more effective than monitoring alone (Rafferty, 2010).

Teacher steps for implementing self-management interventions

Much of the literature reviewed suggests that teachers should consider

following specific steps for implementing self-monitoring and self-assessment

strategies. While the specific steps presented by the literature vary, there are many

commonalities to the general progressions that are suggested by the literature.

The first initial step that many authors suggest in the process of setting up

a self-monitoring or self-assessment intervention is to: identify a goal or target

behavior (Ganz, 2008; Lee, Palmer, & Wehmeyer, 2009; McMillan & Hearn,

2008; Patti & Miller, 2011; Rafferty, 2010). In this first step, authors Lee, Palmer,

and Wehmeyer recommend that teachers start the goal setting process by talking

with students about what goals they would like to work on, and gradually fade

this support, allowing students to set their own goals once they have become more

experienced with the process (2009). Ganz suggests that the teacher should

choose the target behavior that will be monitored, and notes that students can be

involved in choosing a target behavior if their cognitive and language abilities

allow for this (2008). Another author, Lisa A. Rafferty, goes into significant detail in describing how to operationally define the learning goal or target behavior that will be addressed. Rafferty states that "the teacher needs to create a detailed description of what the behavior looks like so that it can be observed and measured" (2010, p. 52). At this point, Rafferty suggests taking baseline data in order to be able to analyze the student's progress with the learning goal or target behavior (2010).

Next, Lee, Palmer, and Wehmeyer suggest developing an action plan (2009). This involves determining when the plan will start and discussing potential barriers to success, as well as how those barriers will be addressed. While most of the research did not mention the use of reinforcers with self-monitoring interventions, some of the literature recommended using reinforcers that students can "earn" when they have met a goal. Ganz recommends that teacher should talk with their students and involve them in determining what types of reinforcers would be motivating for the student (2008).

The next critical step described in the literature is to: select an intervention tool and determine how to use the tool. The intervention tool will provide students with a place to self-record measurable data on the observable behavior the student/teacher team has decided to monitor or self-assess. In an article describing how to use iKidTools, authors Patti & Miller suggest involving students throughout the process (2011). According to Patti & Miller, students should be made responsible for phrasing the words on their self-monitoring recording forms

in order to promote ownership. Lee, Palmer, and Wehmeyer outline some key things to consider when creating a self-monitoring form. First, they suggest including a clear statement about the goal and measures of goal attainment. They also suggest using first person language on the form, as well as leaving space on the page for self-evaluation and self-reflection on how students can improve the following day or week (2009).

Once the tool has been created, the teacher needs to explicitly teach the student how to use the tool with specific criteria. According to McMillan and Hearn, "providing examples of evaluated work helps students understand, specifically the meaning of the criteria and how to use them" (2008, p. 46). Students need to be taught how to differentiate between examples and nonexamples of the target behavior or learning goal requirements (Rafferty, 2010). Ganz suggests modeling and practicing using the self-monitoring system with the student until the student is able to do so independently (2008).

The next step is to implement the intervention. Rafferty suggests that the teacher should continue to monitor the student's performance of the target behavior at first, and fade teacher monitoring as the student increases independence with the intervention (2010). Patti and Miller suggest meeting with the student daily to discuss their performance and graph the results that were recorded on the self-monitoring form (2011).

Next, Lee, Palmer, and Wehmeyer suggest an additional step to evaluate targeted goals and adjust goals or plans (2009). When the student has met their

goal McMillan and Hearn recommend setting up a new learning goal, along with teaching strategies to help students attain the goal (2008). The desired outcome of self-monitoring is for students to increase their awareness of specific behaviors in order to develop independent self-regulation of the behavior without the use of the self-monitoring intervention. Thus, Rafferty suggests fading the use of the tool as students demonstrate increased independence with the learning or behavior goal.

Implications for use of self-management interventions

The literature indicated potential benefits and downfalls associated with self-monitoring and self-assessment interventions, along with recommendations to consider when implementing these strategies.

Many potential benefits were noted throughout the literature. One of the benefits of teaching self-management interventions is that they typically require less prompting than other teacher-managed strategies, allowing the teacher to focus more on curriculum and whole group instruction (Holifield, et. al, 2011). Another benefit of using self-monitoring interventions is that it is relatively easy to implement and is rewarding for both students and teachers (Ganz, 2008). Self-management interventions can be adapted to meet the needs of students with a wide range of abilities or target behaviors (Rafferty, 2010). Self-monitoring and self-assessment interventions are also cost effective as they are essentially free aside from the price of paper and printing. Another important benefit of the use of self-monitoring strategies is that they teach students self-regulation skills which will benefit them throughout their entire lives (Patti & Miller, 2011).

Several studies examined potential shortcomings of self-monitoring and self-assessment. One problem that students have encountered with self-assessment is that there is sometimes a mismatch between teachers expectations and student understanding of standards of quality (Andrade & Du, 2007). Sometimes students' judgment in self-recording can be inaccurate due to their lack of understanding of what comprises good versus poor performance (McNamara, 2011). In addition, author Robert Reid suggests that self-monitoring of on-task behavior or productivity can actually take away from students' work time (1996). He continues on that the time spent counting and recording one's productivity counts as time that the student is not performing the task. Another problem with self-monitoring relates to the time that it takes for teachers to cue students to self-monitor (Holifield, et. al, 2010). This time could take away from instruction, however, it could be avoided by using an auditory or tactile cueing system such as the MotivAider.

Many authors described recommendations to keep in mind when implementing self-monitoring or student assessment interventions in order to prevent or address problems. First, authors McDougall, Morrison, and Awana suggest investing at least 25 to 30 minutes to systematically train students on how to accurately self-record and monitor the learning target or behavior (2012). Ganz suggests that teachers ought to be intentional in helping students set realistic goals in order to ensure that the student sees the value of self-monitoring (2008). Rafferty recommends that teachers should not use self-management interventions

as a learning strategy, and clarifies that self-monitoring interventions are intended to be used with skills that the student already possesses (2010). For both self-monitoring and self-assessment interventions, it is critical to determine specific criteria to measure data. According to a study that measured the effectiveness of "Can-Do" self-assessments, using clear descriptors and first person phrasing can help students evaluate their performance more accurately (Brown, Dewey, & Cox, 2014).

Self-monitoring and self-assessment strategies closely align with the larger movement of self-advocacy and self-determination that has become an increasingly relevant topic in the education field over the past twenty years. Students' abilities to communicate their choices, make decisions, assert themselves, and evaluate their own behavior are all components of self-advocacy and self-determination skills (Kleinert, Harrison, Fisher, & Kleinert, 2010). According to the author, Sebag, "the concept of self-determination is based on the belief that all individuals have the right to direct their lives," (2010, p. 22). The strategies that were used as a part of this study support self-advocacy and self-determination skills. The study will explore students' perspectives on the use of these tools, providing them with an avenue to communicate their opinions about the use of such strategies and give students an opportunity to assert themselves.

Chapter 3

Research Methodology

The goal of this study was to gain a better understanding of how student's perspectives of their learning environment are impacted by the use of self-monitoring and student assessment strategies. The study was conducted as an action research project using qualitative methodology. According to Geoffrey E. Mills, action research is defined as "any systematic inquiry conducted by teacher researchers, principals, school counselors, or other stakeholders in the teaching/ learning environment to gather information about how their particular schools operate, how they teach, and how well their students learn," (2014, p. 8). Different types of action research can be categorized by the methods researchers use (Mills, 2014, p. 6). For this project, qualitative research methods were the most appropriate method.

Qualitative research tends to be conducted in smaller settings and focuses less on numerical data than the quantitative data. Qualitative research focuses on narrative data and involves interaction with participants (Mills, 2014, p. 6). During this study, I used interviews and participant observations to gather qualitative data. The interviews for this study were conducted in my classroom during math and reading centers and participant observations were conducted throughout the school day as students used self-monitoring and self-assessment strategies.

Participants and Setting

The participants of this study were five students from my third-fifth grade special education classroom. These students were selected as participants for the study because they all attend my classroom for specialized instruction in math and reading. The students all have individualized education programs (IEPs) and are on my caseload. Each of the participants has a primary label of Autism Spectrum Disorder and all have a secondary label of Speech Language Impairment. All participants' names have been changed to protect their privacy.

The study took place at a charter school in a large city in the midwest that focuses on individualized education programing. The charter school serves 83 students, 93% of whom receive special education services. The student body at the school consists of 52% White, 30% Black, 10% Hispanic, 6% Asian/Pacific Islander, and 2% American Indian/Alaskan Native students. The teacher to student ratio at the school is 1:6 (2016, Minnesota Department of Education).

Student Interviews

Five students were interviewed individually during math and reading centers in my classroom. Each student was interviewed once at the beginning of the study and again at the end of the study. The interviews lasted 5-10-minutes and were recorded using an iPad with the consent of the students and their parents. At the start of each interview, it was explained that the purpose of the interview was to learn about their perspectives on self-monitoring and self-assessment strategies, and their overall classroom experience.

Justin. Justin is a fourth-grade student who attends my classroom for math and reading classes. Justin is a 10-year-old, Euro-American boy. He is a creative, friendly, and outgoing boy. Justin is very talkative and seems to enjoy school. Justin loves to help others and demonstrates a genuine excitement about learning. Justin sometimes needs support with social skills, such as maintaining appropriate physical boundaries and engaging in conversation about non-preferred subjects. He tends to be critical of himself and may have a hard time accepting mistakes in his academic work or moving on after being redirected to follow classroom expectations. During the study, Justin used self-monitoring strategies to observe and record his classroom behavior.

Maria. Maria is 10 years old. She is a social and energetic fourth-grade student. Maria was born in Spain and was diagnosed with failure to thrive as an infant, meaning that her weight or rate of weight gain was significantly lower than other children her age (Mackner, 1997). She moved to the United States before she began school. Her primary language is English. English has been the language that her parents have used to communicate with her from a young age; though Spanish is also spoken in her home. She loves to talk about celebrities, fashion, and baking. Maria's strengths include a strong memory for names and a positive, flexible attitude. Some of the things that Maria needs support with include attending to academic tasks and seeking sensory input in socially appropriate ways. During the study, Maria used self-assessment strategies during reading and math class to monitor her academic productivity.

Luke. Luke is a fifth-grade student who attends my classroom for math, reading, writing, and science/social studies. Luke is 11 years old and is biracial. He has a mother who is of Asian descent and a father who is of Jewish descent. Luke is an artistic, funny, and bright student. Luke thrives on structure and routine and benefits from sensory breaks throughout his day. Luke has strong academic skills. He is very hardworking and attentive during academic tasks. His strengths include strong reading/decoding skills and math facts fluency. Luke is working on self-regulation skills to promote building healthy relationships with peers. During this study, he used self-monitoring strategies to observe and record occurrence/ nonoccurrence of verbal/physical aggression, as well as self-assessment strategies to monitor his academic accuracy.

Jamal. Jamal is a quiet, and somewhat shy fourth-grade student that attends my classroom for math, reading, and writing. Jamal is a 10-year-old African American boy. Although he tends to be quiet, Jamal has become more and more social as the year goes on. Jamal loves superheroes and action figures. He is also very interested in science and animals. Jamal is very polite and kind to others. He is attentive during academic tasks and perseveres through difficult tasks. Jamal reads at a kindergarten level and is working on first-grade level math skills. Though Jamal has made a lot of gains in the areas of reading and math, he seems highly aware that he is not at the same level as his general education peers. During this study, Jamal used self-monitoring of his performance to graph his progress with academic accuracy during reading.

Sam. Sam is a third-grade student that attends my classroom for math, reading, writing, and science/social studies. Sam is an 8-year-old, Euro-American boy. He is a very playful and silly student. He loves to blow bubbles, collect leaves, and play educational games on the iPad. Sam has strong reading/decoding skills and is working on increasing math facts fluency. He is also working on increasing his reading comprehension skills and language/communication skills. Since Sam is still developing his communication skills, it can be difficult for him to understand/answer questions. He will often answer "yes," to questions regardless of what has been asked. Sam is making progress on building his skills in the areas of following the classroom routine, remaining in place (with the group), and using a quiet voice. Sam does best when he is working towards a preferred break activity. Sam used self-monitoring of on-task behavior throughout the course of this study.

Data Collection & Analysis

This study took place over the course of a two-month time period. Throughout the study, participants were introduced to self-monitoring and self-assessment strategies. Participant observations were conducted in my classroom, throughout the school day as students used their self-monitoring and self-assessment tools. Each observation lasted 30-45 minutes. After each observation, detailed notes were transcribed using an online word processor. Two student interviews were recorded for each student, at the beginning and end of the study. Interviews were recorded using an iPad to ensure quality note-taking, then

transcribed using an online word processor. Field notes on participant observations and interviews were recorded on an ongoing basis throughout the study. Authors, Bogdan and Biklen, describe field notes as a "written account of what a researcher hears, sees, experiences, and thinks in the course of collecting and reflecting on the data in a qualitative study," (1992, p. 107). Observer comments, or reflections on the data being recorded, were transcribed within the field notes throughout the process.

The field notes and interview transcripts were coded and analyzed using a method of comparative analysis known as *Grounded Theory*. Grounded Theory was developed by Glaser and Strauss in 1967. Comparative analysis is a strategic method for generating theory. According to Glaser and Strauss, Grounded theory is "a way of arriving at theory suited to its supposed uses," (1967, p. 3). A major component of Grounded Theory is coding. The use of coding ensures that hypotheses and theories are rooted in the data. Coding consists of assigning conceptual categories to patterns that emerge in the data in order to organize the evidence to formulate a theory (Glaser & Strauss, 1967).

For this study, all field notes were reviewed and codes were assigned as themes in the data emerged. Data was coded using an online word processor. Coding methods included highlighting, underlining, and labeling with notes/ keyword comments along the margins of the page. Additionally, graphic organizers were used to identify the relationships that existed between the repeating concepts and patterns that were noted in the coding process. Finally,

note cards were used to identify connections between repeating patterns to refine and combine codes in order to generate a theory.

In the very beginning stages of generating my theory based on the data, a graphic organizer was used to connect some of the concepts and hypotheses that I had uncovered through the coding process. Initially, 12 conceptual categories or properties emerged that were all interconnected in one way or another. From these 12 categories, I was able to use comparative analysis to determine distinctive elements and themes that the study had revealed.

Some of the initial themes that were noted through coding included: differences in the behaviors being monitored and student responses to their tools, variations in students' levels of independence with the tools, and varied emotional responses to the use of the tool and the reinforcement that they received as a result of using the tool. Other elements that were prevalent in field notes were comments on the "inner dialogue" or metacognitive skills that students engage in throughout the study, and the range of students' apparent abilities to change their behavior as a result of self-monitoring.

Chapter 4

Findings

This chapter discusses the findings from student interviews and participant observations. Throughout the chapter, I will discuss the major themes that emerged from the data. The first major theme that emerged from the data was that students' perspectives of self-monitoring tools varied based on the type of tool that was used and the behavior that was being monitored. The second theme is the impact that self-monitoring strategies had on students' motivation. The third theme relates to how self-monitoring impacted students' self-awareness and metacognition. The final theme that emerged from the data was how self-monitoring and assessment tools impacted students' concepts of self-efficacy and their perceived ability to improve their performance.

Students' Perspectives on Different Types of Self-Management Tools

"I did it! Look, Ms. Erica! I'm off the chart! I earned more than 50 arrows up!"

-Justin, Age 10

As Justin jumped up and down, he painted an informative picture of his perspective on the use of his self-monitoring and graphing tools. There is something to be said about meeting a goal that you have set for yourself and self-management tools are all about tracking your own progress on your goals. During this particular observation, Justin revealed the sense of accomplishment that students can gain through the process of self-monitoring and graphing.

Participant observations and student interviews revealed that students perceived the types of tools that they used differently. There are a wide range of uses for self-monitoring tools and they can be highly individualized to meet student needs. Thus, the types of tools the students used in this study varied a great deal. During this study, students used self-monitoring and self-assessment tools to monitor attention or "on-task behavior," general classroom behavior, academic performance/accuracy, and aggressive behavior.

The participants in this study demonstrated a wide range of abilities in terms of their independence with academic, social, and communication skills and therefore used their self-monitoring tools with varying levels of support. Some students monitored their behavior independently throughout the day, while others needed prompts from adults to monitor their behavior during each class period or incrementally at the end of 10-minute lessons during centers.

Justin

When Justin was interviewed about his feelings on the use of his chart, Justin shared that he felt, "proud," and "independent." When Justin shared that he felt independent, he was referring to the fact he had just graphed a high level of independence with classroom expectations for that day. He had been tracking his independence using his self-monitoring form for several weeks at this point. According to the graph, it was apparent that he needed fewer and fewer reminders to refrain from target behaviors like interrupting, or invading others' personal space than when he had begun using his self-monitoring chart. When asked how

he felt about his overall classroom experience, Justin shared that he was "proud of learning."

Justin used his self-monitoring tool to track his classroom behavior throughout the day. Justin tracked his behavior with a high level of independence. The target behaviors that Justin was working on included increasing awareness of physical boundaries with peers, decreasing off-task behavior during academics, and accepting redirections from staff. Justin and I developed his chart together and it was written using positive, first-person language to describe behavior expectations.

Justin actually initiated the use of self-monitoring strategies on his own. During group instruction, I often prompt students to share how they feel our lesson/activity went by showing a thumbs up, sideways, or down. Shortly after I began using this strategy with the whole class, Justin started marking how he felt he was doing with staying on task by marking arrows up, down, or sideways on his work. This implies that Justin had noticed my use of formative assessment and had taken on the task of self-assessment of "on-task behavior" completely on his own. My conversations with Justin about the arrows he had begun marking on his work made me excited to start using a more formal self-assessment strategy with him, so we created a self-monitoring tool using arrows together.

We utilized the school PBIS expectations to describe expected classroom behavior explicitly. The school refers to these expected behaviors as "star behaviors" and include "making safe choices, trying my best, being respectful,

and being accepting." When Justin demonstrated a "star behavior" independently he marked an "arrow up" on his chart. When he needed a reminder to be respectful, safe, etc. he marked an arrow sideways. If Justin needed more than one reminder to demonstrate "star behaviors," he marked an arrow down. For each subject of the day, Justin had the opportunity to earn 4 arrows up. He had 56 spaces on his chart to earn "arrows up." At the end of the day, Justin would track how many arrows up he had marked using a graph that went up to 50. If he marked more than 50 arrows up, he would color in a section that went "off the chart," indicating that he had a "really good day" that day.

Luke

"I didn't hit or kick anyone! Can I mark a star on my chart?"

-Luke, Age 11

These are words that I heard coming from Luke on a daily basis throughout the study. Each time Luke returned to my classroom after gym, lunch, and specials, his remarks indicated that he was reflecting on his positive behavior choices throughout each day. He recognized when he was doing well with keeping his hands to himself and using kind words; and seemed to be aware of the progress he was making. It should also be noted that he appeared to be highly motivated by working towards a five-minute preferred break activity when he had marked three stars on his chart.

When Luke was asked how he felt about using his chart, he said, "I like my chart. It is awesome. I didn't hit or kick anyone!" He went on to say, "Yeah,

I'm a good boy." What Luke seemed to be saying was that he felt good about himself and his behavior choices. The use of self-assessment strategies seemed to help remind Luke to use appropriate replacement skills when he was upset rather than being verbally or physically aggressive.

During the study, Luke used a star chart to self-monitor his aggressive behavior and a self-assessment form to monitor his academic accuracy. Luke's self-monitoring chart was worded using first-person language and included positive statements about the desired behavior he is working to increase. These statements included, "I can keep my hands and feet to myself, I can use kind words," and " I can ask for a break." Along with the statements, there were visuals above each goal/criteria. Luke monitored his behavior throughout each day. He marked a star on his chart at the end of each class/period to indicate that he had refrained from target behaviors of verbal/physical aggression. When Luke had earned three stars he took a five minute preferred break, such as using an iPad to watch youtube videos.

When Luke did not earn a star, he marked a circle and was offered a sensory break. He was also provided with problem-solving support from an adult, in the form of a social behavior mapping tool or "visual think sheet." Staff also helped Luke make amends after he had engaged in any aggressive behavior by helping him write an apology letter or apologize to peers or the staff involved in person. After Luke had made amends, he would mark a star in the circled spot on his chart.

Sam

> *"First stars, then go outside and get leaves?"*

Sam, Age 8

Similar to the way in which Luke was motivated to "earn stars" on his chart, Sam clearly liked using his chart to work towards a preferred break. Sam loved going for walks to collect leaves in between classes. Observations revealed that Sam's self-monitoring chart seemed to help him to stay on task during non-preferred academic or group activities by reminding him that he would be able to engage in a preferred activity after he had completed the non-preferred tasks or activities.

Sam used a tactile self-monitoring "star chart" to monitor his "on-task" behavior throughout his day. During each class, Sam was prompted to give himself a star whenever a teacher observed him demonstrating on-task behavior. The criteria for "on-task behavior" was defined in first-person language on his chart with visuals for each statement. The statements read, "I can have a quiet voice. I can stay with the group. I can follow the group plan." Sam had spaces on his chart to place three velcro stars for each class period. When Sam had "earned" three stars, he chose a five minute preferred break activity such as blowing bubbles, playing educational games on the iPad, or going for a walk to collect leaves outside. When Sam did not earn three stars, he would be expected to complete the group activity that he had missed and he would not have time for a break.

While Sam was not able to answer questions during interviews, Sam expressed his perspectives on the use of his self-monitoring tool during participant observations throughout the study. During participant observations, he appeared to have a positive experience with using his chart, as he willingly participated in group activities and followed directions when he was reminded that he could earn stars in order to earn a preferred break. He was definitely aware that he needed to stay on task during group/seat work in order to "earn" a break activity. He clearly understood the chart as he would ask, "mark a star?" when he knew that he was on task and would return to tasks when staff reminded him that he needed to earn his stars before he could engage in the preferred activity he was working towards.

Maria

During participant observations, Maria seemed indifferent to using her self-assessment tool. Each time I used the tool with Maria, rather than reflecting on her performance of the goal criteria, she repeated the criteria statements that I read aloud to her. When I asked Maria about her perspectives on using the self-assessment tool, Maria did not offer useful feedback as she answered "yes," to all questions.

Maria used her self-assessment form to monitor her attention to task/ productivity. Maria's self-assessment form was created using Boardmaker© software (Mayer-Johnson, 1999) that depicted visual prompts for attending to task: "Eyes Looking? Brain Thinking?" and "Hands Working?" The target

behaviors that Maria was working on decreasing included spinning around in her chair, rubbing her stomach, biting her forearm, staring out of the corner of her eye (away from her work), and making off topic comments about celebrities, etc. Maria assessed herself on the desired behaviors that she was working to increase at the end of each 10-minute station during reading. She circled "Yes" or "No" for each statement about her attention to task.

Maria needed multiple prompts to use the tool and she didn't seem to understand what she was reflecting on. When asked, "Were your eyes looking at your work?" Maria responded, "Work." My observations of Maria's experiences with the tool lead me to question whether or not the tool was beneficial for her. I wondered whether or not she understood what I was asking her when I prompted her to circle yes or no for each statement. Furthermore, using the self-monitoring tool took time out of her already shortened lessons, and seemed to confuse her.

Jamal

Given my observations of Jamal, it is unclear if Jamal disliked his self-assessment graph, was indifferent to the graph, or perhaps didn't understand what the graph was communicating. Regardless, Jamal had a different perception of his self-assessment tool than the other students in the study. When I asked him how he felt about using the tool, Jamal's response suggested that the strategy didn't appeal to him. He shrugged and said, "I don't know. It's fine I guess." It seemed as though he didn't want to share that he wasn't particularly interested in using the graph.

During the study, Jamal used self-assessment of his performance to track his academic accuracy. Specifically, Jamal tracked the number of correctly read words he was able to read per minute each day. During an interview, Jamal had shared that he liked practicing reading using flash cards. So, I had Jamal practice sounding out 3 letter words using flashcards each day after a mini-lesson on phonemic awareness, or "making words." We sorted the flash cards into piles based on the words he read independently, and the words that he could still use some practice with. He charted the number of words he had read correctly on a bar graph and I pointed out how the bar on his bar graph was getting taller each day.

Jamal sometimes tried to leave my station or "center" quickly, leaving his seat as soon as I took out his graph, which leads me to believe that he didn't like using the graph to chart his performance. When I pointed out his progress, he often seemed confused and would respond by saying, "Okay?" or "Yeah, I know."

While Jamal and Maria didn't seem to find self-assessment strategies particularly motivating, the impact that self-assessment tools had on the other students' motivation was a big factor that seemed to influence their perspectives of their overall classroom experience.

The Impact of Self-Monitoring Strategies on Student Motivation

Of the three students that did seem to like using the self-monitoring charts, all seemed to find using the chart motivating in one way or another. The findings from student interviews and participant observations indicated that students that

found the self-monitoring tools to be motivating were motivated in different ways. Participant observations indicated that some students found earning "preferred breaks" or "reinforcers" motivating. Other students appeared to be motivated by the positive attention or positive feedback from adults that they received when sharing their chart with their parents or teachers. Justin seemed particularly proud when he used a graph to track his growth with his behavior goals, while Jamal didn't seem to find graphing academic progress motivating at all. Throughout the participant observations in this study, students demonstrated varied responses to "reinforcers" or preferred break items.

Sam appeared to be highly motivated by reinforcers. During participant observations, Sam always chose a tactile visual (a velcro image) of a reinforcer from a menu to work towards before starting each subject or class. During one particular observation, Sam refused to participate in reading centers, then changed his mind when he was reminded that he could earn a preferred break if he "earned his stars." At the beginning of the observation, Sam was taking a break on the iPad after he had earned all his stars in gym class. I approached Sam to tell him it was time to start reading centers after I had given him a 1 minute warning a moment beforehand. I showed Sam his chart and the visual for reading class and said, "It's time to start reading stations."

Sam shouted, "No reading!"

To which I replied, "Reading is the group plan right now. What do you want to earn for your break after reading?"

"iPad," Sam responded.

"Okay. You need to earn all your stars and then you can have an iPad break."

I handed him his clipboard and counted down from five as I walked towards the table. Sam brought the clipboard to the table and said, "First stars, then iPad." Whenever Sam became off task, I pointed to the statement/visual on his chart to remind him of his expected behavior. Sam complied with all of his requests during the 10-minute lesson and placed a star on his chart at the end of the lesson/station. This was typical behavior for Sam, and participant observations throughout the study indicated that Sam was highly motivated by earning stars in order to gain access to preferred break activities.

Another student that liked earning reinforcers or preferred breaks was Luke. Luke used his chart to monitor his aggressive behavior. Whenever Luke had marked three stars on his chart for keeping his hands to himself and using kind words, he was able to earn a preferred break activity. His favorite activity was using the iPad to play games or watch videos. During a participant observation, Luke was observed returning to the classroom after gym. When he walked into the classroom, Luke said, "I didn't hit or kick anyone! I earned three stars! Can I use the iPad?" When I asked Luke how he felt about earning break time he said, "Awesome, Dude!" Luke also asked to bring home his star chart each day, so that he could show his parents that he had earned all of his stars for the day. In

observing Luke's behavior, he appeared to be very proud of his chart and seemed to like sharing his progress with his parents.

While Justin never showed an interest in earning tangible reinforcers or preferred breaks, observations revealed that he was highly motivated by the positive feedback he received from his parents about his chart. At the end of each day, Justin counted all of the "arrows up" he had marked on his chart and then recorded that number on a bar graph. When Justin returned from the general education classroom each afternoon, he almost always seemed excited to count the arrows he had marked on his chart.

One day during the study, Justin earned 48 "arrows up." After counting his arrows, Justin jumped up and down and had a huge smile on his face. He shouted, "I made it to my 40's!" Then, he pointed to when he had recorded a few days when he had earned 20-25 arrows up and said, "20's aren't so great, but 40's are great!" Justin's response indicated that he was proud of the improvements that he was making in regards to his classroom behavior, and he was able to recognize the changes that he had made when he saw the visual representation of the data he had recorded on his graph.

Another day, Justin earned 50 arrows up (which is the top of his graph) and he seemed to be absolutely thrilled. He jumped up and down, saying "I did it! I didn't get any arrows down! 50! Is that great?" Of course, I shared his excitement and congratulated him. When Justin walked out of the school that afternoon, he ran to his mom and leaped into her arms with a huge smile on his

face, shouting, "I made it to 50!" This observation painted an informative picture of the sense of pride that Justin associated with his self-monitoring chart.

For some, self-monitoring appeared to be less motivating. When Jamal recorded the number of words he read, he didn't seem interested. During an interview, I asked Jamal how he felt about his self-monitoring chart.

He pointed to the most recent bar on his graph and said, "the purple one is big."

I said, "Yeah! You're right. Look at how many more words you are reading now compared to before."

I pointed at the shorter bars from when he had just started tracking his progress and asked, "How do you feel about the progress you're making?"

He replied, "It's easy."

Jamal quickly stood up and walked away, as this interview took place at the end of my station time with him during centers. Jamal seemed to understand that the academic tasks he was working on were getting easier for him, but it is unclear whether or not that was due to the use of the self-monitoring, or if he already had a self-awareness of the progress he was making without the graph. While the self-assessment graph may not have had an impact on Jamal's self-awareness, it was apparent that it had an impact on some of the other participants' metacognitive skills.

Impact on Students' Self-Awareness and Metacognition

Students' perspectives of self-awareness and metacognition was another repeating theme that kept coming up during the coding process. Author, Desautel, describes metacognition as "thinking about one's own thinking," (2009 p.). Throughout the study, participants revealed that their perspectives on accepting their mistakes and being honest about their behavior changed over time. Students demonstrated a wide range of perspectives on the reflection process and the task of "moving on" after they had engaged in a behavior with an undesired consequence.

At the beginning of this study, some students had a hard time accepting when they did not meet the criteria to mark a star or arrow up on their chart because they were not adhering to behavior expectations. Luke was one of the students that needed help moving on when he had not earned a star. As he grew more comfortable with his chart he seemed to be more accepting of his mistakes.

During one participant observation, Luke walked into the classroom after lunch and recess, and said, "I didn't hit or kick anyone! Can I mark three stars?" On this particular day, I had observed Luke kicking a peer that was being loud in the hallway on the way to lunch. When I reminded him of the incident, he got teary eyed and asked, "What? But, I didn't hit or kick anyone." Then he appeared to remember what had happened and said, "But, (the student) was yelling." I reminded him that when someone is yelling we can ask them to, "Please stop," or tell a teacher. I told him he could circle the spot where he had not earned a star,

and then mark a star on his chart after he filled out a "visual think sheet" and apologized. Luke used a visual think sheet to reflect on his behavior and to remind him of appropriate replacement behaviors to use in similar situations in the future and wrote the peer an apology letter and drew him a picture. After he apologized to the peer, he marked a star on his chart and moved on to the next class. It is unclear whether Luke lied intentionally when he marked a star on his chart, or if he may have had trouble recalling that he had kicked someone.

Earlier on in the study, Luke would often become upset when he did not earn a star in one of the boxes on his chart, and this seemed to lead to continued problem behaviors. In order to address this issue without causing him additional stress, Luke now simply circles the spot that he missed, reflects on the incident with an adult, makes a plan for what he can do differently, apologizes to the other person involved, and then marks a star in the circle on his chart and moves on with his day. This seems to help Luke process what has happened and requires him to think about what was going on in his mind at the time, as well as the perspectives of others involved. In turn, this increases his self-awareness of his feelings of anxiety and how he can respond to those feelings in future situations.

Justin reiterated this sentiment. At the beginning of the study, he seemed to get upset when he realized he needed to mark an arrow down or sideways on his chart. Though Justin was generally always honest when he marked his chart, it seemed to cause him anxiety to record that he had needed reminders to follow classroom expectations. In observing Justin as he used his chart over the two-

month study, I noticed that his reaction to recording arrows sideways or down

changed over time. Towards the end of the study, Justin seemed to be more aware

of his ability to improve his behavior and was more comfortable with moving on

after he had engaged in a target behavior. During one observation, Justin checked

in with me when he was marking his chart after gym class.

He asked me, "Did I earn all arrows up in gym?"

I said, "Well, I wasn't there. You tell me. Did you need any reminders?"

Justin replied, "Yeah, I was kind of bothering (another student)."

I responded, "Well, did she ask you to give her some space?"

Justin said, "Yeah."

"Did you listen right away? Or did she have to keep asking you?"

"She had to keep asking me... So that's an arrow down?"

"Yeah. What can you do differently next time?"

"I can be safe and respectful. Like, I can walk away when (the other

student) asks me to give her some space."

While Justin is not aware of the concept of metacognition, he was

demonstrating that he was thinking about his thinking, i.e. using metacognitive

skills to reflect on his thoughts and actions during the situation that had occurred

in gym class. As Justin continues to use his chart, he has started to mark the

arrows on his own and will talk to us about his plan to change his behavior. For

example during one observation, Justin shared that, "So, I started the day kinda

rough... But I can still earn arrows up for morning meeting, right?" Often,

pausing and thinking about what has happened seems to help get him back on track and leads Justin towards demonstrating more desirable behavior in the following class/period.

Maria also demonstrated metacognitive thinking when she used her self-assessment chart to monitor her attention. During one observation, Maria was pointing to the words in a story as I read to her. I noticed that Maria had become off-task and was looking around the room and laughing. I was able to redirect Maria by pointing to the visual for "Eyes Looking?" on her visual assessment tool and ask, "Maria, what is your job right now?" Pointing to this visual helped steer Maria back to her task of attending to the book. In this case, Maria needed a higher level of support to acknowledge her behavior, but she was still able to return to her task without a verbal prompt. In this way, Maria's visual assessment tool is helping her to think about her behavior and change the behavior without a verbal reminder from an adult. This action increases her independence with self-monitoring her own attention.

Impact on Students' Concepts of Self-Efficacy and Perceived Ability to Improve Performance

The last theme I noted while coding my data was related to the participants' concepts of self-efficacy and their perceived ability to improve their performance. McMillan and Hearn describe students' self-efficacy beliefs as student "perceptions of their ability to do well on a specific task, and the value of doing well," (2008, p. 44). Self-assessment doesn't work in a vacuum and

students need to be introduced to additional strategies to help them do well. Self-monitoring is only one aspect of self-assessment. Thus, it is important to note that students used other interventions in conjunction with self-monitoring and self-assessment tools. According to McMillan and Hearn, self-assessment is a cyclical process which involves self-monitoring, self-evaluation, *and* implementation of strategies to improve performance (2008, p. 41).

There have been a considerable number of studies that suggest that self-monitoring and assessment lead students towards developing a greater sense of self-efficacy. The students' perspectives of self-efficacy that were noted during interviews and participant observations seemed to confirm this notion. By the end of this study, Justin had a strong concept of self-efficacy. He was known to have a positive outlook and during one observation, he started the day off saying, "I'm going to earn 50 arrows up today! What if I could earn 80 arrows, up? I think I could do it!" This statement seems to indicate that he was challenging himself to do even better than he had the day before.

Through monitoring, recording, and graphing behavior, Justin was able to visually see his progress. His self-monitoring form provided him with concrete evidence of his ability to do well with his specific goal criteria, thus enhancing his concept of self-efficacy. However, Justin didn't automatically do well with the goal criteria simply because he was recording his behavior. It should also be noted that Justin and the other participants needed to be taught the necessary skills to meet the goal criteria. In order to guide students towards meeting the specific goal

criteria or behavior that was outlined on their self-monitoring form, students needed to learn specific strategies to improve their performance. This required the use of additional intervention tools to support students' development of self-management skills and coping strategies.

According to Kobus, Maxwell, and Provo, "Students experience self-efficacy when they develop the skills to achieve, believe that they will succeed, and receive affirmation from significant others; not only that they have skills but also that they are expected to use those skills to succeed," (2008, p. 48). The process of self-monitoring required participants to identify and develop the skills they need to achieve their goals, provided them with evidence of their progress, and provided them with an affirmation that they had demonstrated these skills.

Chapter 5

Discussion

Overview of the Study

This study examined five special education students' perspectives on self-monitoring and student assessment strategies. The purpose of the study was to examine the impact that self-monitoring and self-assessment had on students' perspectives regarding their classroom experience. Throughout the study, data was collected through participant observations and student interviews. The data that was collected revealed four major themes. In the following chapter, I will provide a summary of the findings, along with my conclusions and recommendations for classroom application.

Summary of Findings

Overall, students' perspectives on self-monitoring and self-assessment strategies were varied. The participants' perceptions and reflections were similar in some ways but also appeared to differ based on the type of tool the students used and their level of independence with the tool. Students' perspectives on their classroom experiences while using the tools also varied. All of the students were engaged in metacognitive thinking about their classroom experience as a result of using self-management interventions and several of the students demonstrated increased motivation and improved perceptions of self-efficacy.

Conclusions

The themes that were introduced in Chapter 4 revealed several considerations to address when implementing self-management strategies such as self-monitoring and self-assessment interventions. First and foremost, the results indicated that self-monitoring and assessment forms need to be individualized based on student needs, abilities, and individual behavior targets or learning goals. It should also be noted that students should be involved in creating their self-monitoring forms and determining reinforcers to use with their self-monitoring form. Another insight that I gathered from this study is that it is important for teachers to provide modeling and scaffolding to help students increase their self-awareness and metacognitive thinking. In addition, teachers need to guide students as they reflect on their learning or behavior by helping them identify strategies to increase or decrease the target behaviors or performance goals that they are monitoring.

There Is No "One Size Fits All" Self-Monitoring Tool

Based on the perspectives that were highlighted in Chapter 4, it is evident that self-monitoring and assessment tools need to be highly individualized in order to be beneficial for students. Self-monitoring and assessment intervention tools have been used by students of all ages and abilities. These tools can be used to monitor academic accuracy, productivity, and classroom behavior. During this study, students used self-monitoring and self-assessment tools for a variety of

purposes. Thus, student self-monitoring forms took on different characteristics and students had varied responses to the use of the forms.

For the most part, students' responses during interviews and observations revealed that students enjoyed using self-management strategies, however not all students seemed to feel this way. There appeared to be a relationship between students' levels of understanding of the self-management tools and their level of satisfaction with using those tools. The data indicated that the use of self-monitoring and assessment tools had a greater impact on students' perceptions of their classroom experience when the students clearly understood the criteria that was being measured and the task of monitoring.

In order to increase students' understanding of these elements of the intervention tool, students should be involved in creating their self-monitoring form whenever possible. Author, Ganz, suggests that students can be involved in choosing target behaviors or academic learning targets to monitor when their cognitive and language abilities allow for this type of participation (2008). This notion was echoed in my research, as self-monitoring tools seemed to be more beneficial for students when they had a vested interest in changing the behaviors that they were monitoring. That is to say, that students demonstrated more interest in using self-monitoring tools when they believed that changing their behavior would lead to a positive outcome. Therefore, involving students in the process of creating their own self-monitoring tool may lead to a greater success with the use of the tool.

Reinforcers and Motivation

In addition to involving students in choosing target behaviors to monitor, students should be involved in determining the type of reinforcement that the student may receive as a result of their improved behavior. Not all students will respond to the same types of reinforcers. While some students may be highly motivated by breaks or tangible items, others may have no interest in these types of reinforcers. Some students may be motivated most by the natural benefits of improving their performance of a skill, such as the pride or satisfaction associated with the use of the chart based on their own recognition of their personal growth.

In order for self-monitoring to have a positive impact on student motivation, it is essential that students are aware of the potential benefits the student may gain as a result of improving their behavior. Students' interests and preferences should be taken into consideration when developing a plan for the type of reinforcement that will coincide with the use of the form. Author, Jennifer B. Ganz, recommends providing students with a "reinforcer menu" in the form of a list of specific items or preferred breaks that the students can earn in order to increase students' motivation to improve the target behavior (2008). During my study, Sam had a positive response to this approach. Another approach that seemed to have a positive impact on student motivation was having students share their progress with their parents or other preferred staff from within the school. Graphing progress may also be motivating for some as Justin responded to graphing by setting new goals for himself to perform better each day.

Self-Awareness and Metacognition

  While motivation is a key factor in setting change into motion, first and foremost, students need to develop self-awareness. Before students can change their behavior or performance of a skill, they need to be aware of their current performance. The participant observations revealed that the use of self-monitoring tools leads to an increase in students' self-awareness of their current levels of performance; because the tools required them to observe and record their performance based on explicit criteria. As students recorded data on the behavior they were monitoring, they were able to identify times and circumstances that may lead them to get off track or become off-task. By modeling and scaffolding strategies for reflection and revision, teachers can guide students towards developing metacognitive skills.

  Authors, McMillan and Hearn describe metacognition as "the capacity to monitor, evaluate, and know what to do to improve performance," (2008, p. 43). Self-assessment requires students to do just this. Rather than strictly hearing observations or directives from teachers, self-assessment allowed my students to address their own behavior based on their observations. While at first, my students appeared to have difficulty with the basic skill of recognizing and admitting to themselves when their behavior did not meet the expected criteria, their ability to recognize when they did not meet expectations changed over time. When students recorded off-task or undesirable behavior, they were prompted to reflect on that behavior. This reflection component seemed to help them move

past their feelings of guilt, or imperfection. The additional steps of self-assessment lead them to be able to see that they could recover from their mistakes. Thus, self-assessment enabled the students to become more resilient by helping them move on after they had made a mistake.

For this reason, the reflection is a critical component in the process of self-assessment. In order to help students increase their self-awareness and metacognitive thinking, teachers need to walk their students through the steps of reflecting and revising by offering them the tools and support they need to improve their performance of a desired behavior or skill.

Impact on Students' Concepts of Self-Efficacy and Perceived Ability to Improve Performance

Participant observations revealed that students' perceptions of their ability to perform the skills that they were monitoring increased with the use of self-assessment tools. While students continued to face challenges throughout the course of the study, they seemed to demonstrate a stronger sense of resiliency at the end of the study. The participants demonstrated that tasks that once seemed difficult to them appeared to seem more manageable to them as time went on. This suggests that the tools students were using led them to develop improved perceptions of self-efficacy.

This in part was due to an increase in students' awareness of coping strategies and sensory tools to help improve their performance of the skills or behavior they were monitoring. As a result of the reflection component of self-

assessment students were able to more easily identify these strategies independently. Social behavior mapping tools played a large role in developing these skills for Sam, Justin, and Luke. Through the use of social stories and behavior mapping "think sheets" the students were guided through the process of identifying alternative replacement behaviors to the ones they were trying to reduce.

With guided practice, students were able to recognize that they could use the alternative replacement behaviors to avoid problems. For instance, while Sam may have screamed or resorted to aggression as a way of avoiding non-preferred tasks at the beginning of the study, he had learned that he could ask for a wiggle seat to make sitting through group instruction less burdensome on him, or ask to go to a break space when he was angry. He learned that he could get through tasks that were challenging for him and in turn, he would have greater access to the preferred activities that he wanted to engage in if he was successful at following the group plan, staying with the group, and having a quiet voice.

With the use of self-assessment strategies, it appeared that the students became more confident in their ability to get through difficult tasks, or handle difficult situations that caused them anxiety. This was noted in many observations when students demonstrated that they were able to use modeled replacement behaviors independently in stressful moments. For example, Luke now tells his peers, "You're being too loud," or tells a teacher when "(A peer) budged!" instead of using physical aggression to stop the peers' behavior.

Recommendations

The results of this study indicate that the use of self-monitoring and self-assessment tools may have a positive impact on students' perspectives regarding their classroom experience. Students revealed that they had positive experiences with self-monitoring and assessment tools when they clearly understood the criteria that were being measured and the task of monitoring. When implementing self-management strategies, I would recommend that the following considerations be taken into account:

1) Self-monitoring forms can and should be highly individualized based on student needs/behavior or academic goals.

2) Students should be involved in creating their self-monitoring tool when students' cognitive and language abilities allow for participation.

3) Students should be involved in choosing target behaviors or academic learning targets to monitor.

4) Students' interests and preferences should be taken into consideration and students should be involved in the process of developing a plan for the type of reinforcement that will coincide with the use of the form.

5) Teachers need to provide modeling and scaffolding of the self-monitoring and self-assessment process.

6) Teachers need to guide students through the reflection process and provide students with instruction on strategies to increase or decrease the target behaviors or academic learning targets that they are monitoring.

Chapter 6

Self-Reflection

The purpose of this chapter is to reflect on the process of this action research project and my growth as an educator. I have learned a great deal about the research process, time management, and the value of learning from my students. Although I was faced with challenges and problems to overcome throughout the process, I gained many new insights along the way.

At the beginning, it took some time for me to decide just what it was I wanted to research. There are so many different aspects of teaching that I knew I was interested in learning more about. I wanted to research something that would help me to improve my instruction and make my classroom more student-centered, rather than teacher driven. Essentially, my goal was to research some kind of pedagogical practice that would empower my students to feel more in charge of their own learning. I sifted through resources that I had gathered from my previous coursework and was reminded of the surface level reading I had done on self-monitoring and self-assessment strategies. From what little I knew, I thought that it could be a great strategy to implement in my classroom. So I began to research the topic and dove into the process.

While it may have taken me a while to decide on my topic, I was glad that I took my time with my decision because I ended up spending a great deal of time on my planning, research, coding, and writing. First, it took time to decide how I would research my topic. The fact that many of my students have limited

language and communication skills made it less clear how I would gather data regarding their perspectives. Once I had determined that I would use a combination of observations and interviews for data collection, I was able to submit my IRB and move forward. Writing my literature review took a great deal of time, planning, and organization. I learned that I worked best when I set aside time to spend at the library a few nights each week.

One of the most valuable lessons that I learned about the research process is that it is important to hold yourself accountable to the deadlines that you set for yourself, while still practicing flexibility. Throughout the process, I was faced with a number of setbacks and factors that made the process more challenging. Over the winter, there were numerous rounds of classroom-wide illnesses and student absences. One of my classroom paraprofessionals left mid-year and my classroom was short staffed for four months. Suddenly, it seemed that the strategies I was researching would be impossible to implement with any kind of consistency. Finally, things settled down; and just as soon as I had begun my data collection, spring break had arrived. Amidst these setbacks, I stayed active in the process by preparing myself for the upcoming stages of the project and keeping up on my course work.

When it came to the data collection and coding process, I had to be diligent about utilizing my time wisely. This meant that I had to take a working lunch break and spend part of every evening working on my project. Game nights and dinner parties were put on hold; and I had to plan how I would use any

moment of free time I had time with care, reserving most if not all free time for family. Ultimately, I had to learn how to find balance and set priorities.

Staying organized and working forward even in the face of setbacks is what got me through the project. Whenever I got too hung up or stressed out on one aspect of the process, I tried to shift gears and focus my energy on another aspect. Arriving at my theory was perhaps one of the most exciting moments of the process. I spent several days highlighting, making notes, and searching for recurring keywords and concepts to generate my theory. When I made a graphic organizer of the information and visually mapped out some of the connecting concepts, I had an "aha moment." The concepts aligned and I was able to look at what I had learned in a whole new light.

While this action research project was all about uncovering how self-monitoring and self-assessment strategies can empower my students to take ownership of their learning and progress, I am also left with a feeling of ownership of my learning. It was incredible to see how self-management strategies impacted my students. What was perhaps even more incredible was to discover how much I can learn from my students by simply listening to what they have to share, and being observant of what they are telling me through their behavior. Overall, I am left with a feeling of empowerment as a teacher, with the knowledge and the tools to continue to grow to become an expert in the field.

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