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SELF-MONITORING FOR STUDENTS WITH DISABILITIES

by

Lauren Beth Serebransky

A Thesis

Submitted to the
Department of Interdisciplinary and Inclusive Education
College of Education
In partial fulfillment of the requirement
For the degree of
Master of Arts in Special Education
at
Rowan University
May 1, 2016

Thesis Chair: Sydney Kuder, Ed.D.

Dedication

This thesis is dedicated to my mother, Nina Serebransky, for all of her love and support and to my amazing friends, family, and co-workers who helped me throughout the thesis writing process.

Acknowledgements

Special thank you to Dr. Sydney Kuder for all of his help and support through the thesis writing process. Also, thank you to Dr. Joy Xin for proof reading this thesis and to my amazing co-workers and students for all of their assistance with this process.

Abstract

Lauren Beth Serebransky
SELF-MONITORING FOR STUDENTS WITH DISABILITIES
2015 - 2016
Sydney Kuder, Ed.D.
Masters of Arts in Special Education

This study sought out answers to the questions: Are students who are taught self-management skills better able to monitor their own learning then students who are not taught the skill? Does the use of self-monitoring applications improve a student's chance of becoming a better self-monitor? Do high or low-tech strategies help students manage their learning and behavior the best? For this study three seventh grade students were observed. Two of the students were observed in a self-contained English Language Arts class while the last was in an inclusive English Language Arts class. Each student had varying disabilities that affected his or her learning and or behavior. The students were observed for one week to identify what skills he or she needed assistance with self-monitoring. After the skills were identified, each student was taught three strategies with one week in between. The first strategy was a low tech strategy, the second was a combination high and low tech strategy, and the third was a strictly high tech strategy. Throughout the process the students were observed by the teacher as well as self-accessing their progress in each task.

After doing the research it is clear that students who are taught self-monitoring skills are better self-managers. Each participant made strides in their self-management but not all of the techniques worked for every student.

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Chapter 1

Introduction

The change between elementary and secondary school can be a challenge for many students. It is the time in their lives where they are forced to stop relying on teachers and parents for their education and begin to rely on their own personal work ethic. For some students this transition comes easily. They are able to manage their own work and understand the necessity of trying their best and asking for assistance if necessary. Others do not. Many students with learning disabilities are in this second category. This ability to be responsible for his or her own learning is called self-monitoring of learning. "Self-monitoring is defined as a multiple – step process where the student observes the occurrences and non-occurrence of the behavior and records feathers of the observed behavior," (Wills & Mason, 422). Students learn to be self-monitors by using self-management techniques. If a student lacks self – management skills he or she will be unable or unwilling to ask for help if necessary. He or she may also not get work completed in a timely manner if at all.

Traditionally, self-monitoring of learning is a major problem for many students but especially for students with special needs. Adults may feel sorry for these children and therefore do not expect them to take control over their own education. They instead do things for them. Adults often make excuses, saying the child cannot be accountable for their learning due to his or her disability. This lack of self – management skills could affect children for their entire lives and hurt them as adults. Many of these children never learn to be responsible for themselves since others have always not held them

accountable. Other students want to be accountable but are unable to do to their lack of knowledge of how to be accountable. These students need additional support, strategies, and technologies to become effective self-monitors.

In this study, I will attempt to modify the self-monitoring abilities of three students using a variety of techniques including: paper task charts, sticker charts, and applications such as I-Connect (Wills and Mason, 422). The students will be asked to monitor three individualized goals using each of the strategies for a week at a time. At the conclusion of the study, the students will meet and discuss with me what worked best for them and if it increased their self-monitoring abilities.

The two research questions I will examine in this study are:

-Are students who are taught self-management skills better able to monitor their own learning then students who are not taught the skill?

-Does the use of self-monitoring applications improve a student's chance of becoming a better self monitor?

Student A is a seventh grade Caucasian male with the diagnoses of oppositional defiant disorder, attention deficient disorder, and learning disabled. Student A's three goals are being prepared for class when the bell rings, copying his homework in his agenda, and staying on task for ten minute intervals. He is being studied in a Learning Disabled English Language Arts class. The class consists of nine students, five boys (three Caucasian, two African American) and four girls (all Caucasian), on varying levels and with varying diagnoses. Theses diagnoses include: oppositional defiant, attention deficient, autism, and learning disabled

Student B is a seventh grade Caucasian female with the diagnosis of learning disabled. Her three goals are independent reading comprehension, decoding of new words, and reading consistently for fifteen minutes. Student B is being observed in her inclusion English Language Arts Class. The class consists of twenty-six students: thirteen girls (ten Caucasian, two African American, and one Asian) and thirteen boys (nine Caucasian, two African Americans, two Indians). The class also consists of six special education students with disabilities including oppositional defiant, attention deficient, autism, and learning disabled. Another three of the twenty-six students are undergoing the IR&S process.

Student C is an eighth grade African American female with the diagnosis of learning disabled. Her three goals are socially related. They include: walking away when feeling angry, only taking out her phone at appropriate times, and staying on task in five minute intervals. She is being observed in her Learning Disabled English Language Arts Class. The class consists of six students, two boys (both African American) and four girls (three Caucasian and one African American). The students diagnoses include: oppositional defiant, attention deficient, autism, and learning disabled.

Learning Disabled is defined as a disorder in which one or more of the basic psychological processes involved in understanding or using language. Students with this disability may struggle in reading, writing, and or math. Oppositional defiant is defined as a disorder in which a child is defiant and disobedient to authority figures. Students with this disability struggle with behavior. Attention Deficient Disorder is defined as a chronic condition including attention difficulty, hyperactivity, and impulsiveness. Autism

is defined as a developmental spectrum disorder that impairs the ability to communicate and interact.

The independent variable in the study is the use of the self-management techniques. The students will begin the study with no instruction of how to monitor their goals. I will monitor them. The second week I will introduce a low technology strategy to help them with self-monitoring. I will continue this process for a few weeks. The last strategy I will introduce is the application I-Connect. This application will prompt students at specific variables to ensure that they are meeting their goals. If they are not the application will flash helping to grab the student's attention and remind him or her of his or her goal (Wills & Mason, 428).

The dependent variable is the classroom expectations. Each of the students are expected to follow the same classroom rules and procedures. They are also held to the same academic rigor and standard. The other students with learning disabilities in the class are my control group as well as the data I will receive from the three students during week one.

It is hypothesized that over a four-week period the students receiving self-management skills will be better able to self monitor their learning than they were week one of the study and that of their peers that do not receive the instruction. It is also hypothesized that the application will help students self-monitor their learning better than the low technology options. If this happens it means that students can become more responsible for their learning if taught correctly how to do so. It would show that children in special education are not helpless and can accomplish tasks that they wanted assistance

in without assistance. This should empower students to be more independent and assert their independence in their lives.

I picked this topic because I see many students come into my classroom thinking I am solely responsible for their education. They think that if they do not understand something that it is my job as the teacher to read their minds to know that they do not understand. My own brother, a college student with Autism, has struggled with managing his learning most of his life. As he has gotten older this has become more and more of an issue. Students need to learn to be responsible for their education so that they can become functioning members of society.

Chapter 2

Literature Review

Self-monitoring of learning is an important skill to have in the 21st century. Students are constantly being asked to evaluate what he or she knows independently through assessments, rating scales, and self-reflection worksheets. Many students are unable to perform these tasks due to lack of education and or ability. They feel overwhelmed and lost!

To help students overcome this hurdle, teachers need to teach students self-management techniques and model them in the classroom. These techniques include both low and high tech processes. In this chapter literature related to self monitoring and self management techniques will be explored including low tech techniques such as: paper task charts and sticker charts and high tech techniques such as I-Connect and MotivAider.

Self-Monitoring Skills for Students with Disabilities

The idea of teaching students with disabilities to self-monitor has been a topic of many research studies in the past twenty years. In the study by Shimabukuro, Prater, Jenkins, and Edelen-Smith (1999) , the authors examined the effects of self-monitoring on three males with both learning disabilities and Attention deficit hyperactivity disorder or Attention deficit disorder. The boys, seventh and eighth graders, were studied during reading, mathematics, and writing in a self-contained classroom. After a lesson they were asked to complete an independent task and then complete a progress graph after. On this graph the students were asked to chart their task completion and accuracy for the task they completed independently (Shimabukuro et al., 1999). The authors found that asking

the boys to complete this chart after each task raised their task completion and accuracy rate to 90% (Shimabukuro et al., 1999).

Rutherford and DiGangi (1992), studied six students with learning disabilities and their ability to self monitor their on-task behavior. Each student was required to set a goal for him or herself as to how long he or she could stay on task for. After the goal was set they recorded this data on a piece of paper. After the decided number of goal minutes was up, the students would analyze their findings to see if they had met their goals. The author's found that the students were able to better reach their on task goals through self monitoring. Also having the students set their own goals helped with this process because they felt like they needed to beat their own record each session.

Jitendra, Cole, Hoppes, and Wilson (1998), studied four sixth grade students with learning disabilities. In this study the authors were looking to see if they could increase the self-monitoring of these students during reading comprehension. One of the students was the control subject and each of the other three were taught self-monitoring techniques. The authors found that the three students that were taught the self-monitoring strategies of charting and graphing were better able to self-monitor their learning and in turn better able to ask for help when needed.

These studies suggest that when students are taught to monitor their own learning they are more conscious of what they need to do and in turn have higher completion and accuracy rates as well as less of task behaviors. Students know that they are being head accountable for their own education and are able to visually see their improvement or lack of improvement on a graph or chart.

Self-Management Skills

Each of the above studies show that students can be taught to self-monitor. To do this they need to learn a variety of self-management skills. These skills can be broken into two categories: high tech strategies and low-tech strategies. High tech strategies include anything that is computer or technology based such as applications that are used on an iPad. Low-tech strategies include anything that does not use technology such as sticker charts and paper graphs. Both types of self-management techniques are effective in their own ways. It just depends upon the student. Each technique allows students to physically see how he or she is doing with the skills he or she is working on. Being able to see the progress or lack of progress is the most important part of any self-monitoring program.

High tech strategies for self-monitoring: I-Connect and MotivAider. The I-Connect application is an app that teachers can program with certain skills they desire the students to do such as staying on task. The app sends reminders to the students at set intervals to ensure that the skills the teacher wishes the student to work on are being followed. They then record if they are completing the skills or not on the application. Using high tech applications such as I-Connect can be a great way to motivate students to be self- monitors. Wills and Mason (2014) studied the use of "the I-Connect application with two students (ages 14 and 15) with learning disabilities and attention deficit hyperactivity disorder in a high school inclusive classroom. The students were each given a handheld tablet with the application I-Connect open. The application gave the students on-task prompts every five minutes (Wills and Mason, 2014). This allowed the students to be discreetly reinforced. As the study went on the students were prompted less and less

through the application and eventually not at all (Wills and Mason, 2014). Wills and Mason found that "the intervention resulted in positive, stable improvements in primary dependent variable of on-task behavior for both students and less clear improvement in the generalization of disruptive behavior" (Wills and Mason, 2014, p. 421).

Another study that examined the use of high tech to help students self-monitor was conducted by "by Legge, DeBar and Alber-Morgan (2014?) using the MotivAider® device. MotivAider® is a vibrating device that will go off at set intervals. The authors of the study believed that this vibration would remind the students to stay on task (Legge, et. al., 2014).In this study the authors worked with three fifth and sixth grade boys with Autism and other disabilities during their math class. The students used the MotivAider® device and then recorded if they were on task or not. The researchers found that with the use of the MotivAider® device students had between a 96 and 99% increase of on task behaviors.

These studies indicate that using high tech self-management techniques can significantly help students self-monitor on task behavior and their learning. With the I-Connect application everything is done through the application. This allows for the students to be discreet when working on skills. In contrast the MotivAider® device allows students to physically feel a vibration to remind them of their goals but to chart their actual progress they still need to implore a low tech strategy as well.

Low tech strategies: paper task charts and sticker charts. Using low-tech procedures such as paper task charts and sticker charts have also worked to increase self-monitoring behavior. For example, Moore, Anderson, Glassenbury, Lang, and Didden (2013) studied

the effects of using a tactile prompt to increase the on-task behavior. Three males between the ages of twelve and thirteen during their humanities class for fifty minutes at a time. These students were asked to graph their on task behavior daily. The researchers found that the students had, "an increase in on-task behavior… with all participants on implementation of the self-management package, and questionnaire-based social validity finding suggest this was an acceptable and effective procedure for classroom context" (Moore, et. al., 302). This means that the students showed improvement in their self-monitoring by using the graphing method.

Coughlin, McCoy, Kenzer, Mathur and Zucker (2012) examined the effects of a self-monitoring strategy on children with mild intellectual disabilities. In this study the authors looked at three first graders with mild intellectual disabilities. The three students were study through out the school day and across all subject areas. The authors were trying to see if using a sticker chart could increase their on-task behavior (Coughlin, et. al., 2012). The study found that all three students decreased their off task behavior time after using a self-monitoring strategy (Coughlin, et. al., 2012).

Rock (2005), evaluated nine elementary students with exceptionalities to see if using the low tech strategy of ACT-REACT. In this strategy students are taught to, "articulate your goals, create a work plan, take picture(s) (use photographs to help create concrete mental representations of the goals), reflect on your goals, evaluate your progress, and ACT again (Rock, 4)". The students were asked to do these steps in five-minute increments and to record their process on a data sheet. Rock found that all nine of the students increased their self-monitoring skills in their inclusive classroom.

These articles indicate that low-tech strategies are also extremely effective in teaching students self-management skills to increase their self-monitoring abilities. Graphs and sticker charts allow students to see a visual representation of their progress and motivate them to continue to complete their required tasks and or skills.

Summary

After reviewing the literature on self-monitoring and self-management strategies it is clear that both high and low tech techniques work to teach students to monitor their learning. This study will implore both high and low-tech strategies and see what helps students learn to self-monitor best. Students will be expected to begin to be weaned off of the techniques with the ultimate goal of self-monitoring automatically without needing either low or high tech techniques.

Chapter 3

Methodology

This study was conducted at a middle school during their ELA (what does ELA mean?) class. The school is in a suburban town in southern New Jersey where about 40% of the students qualify for title 1 assistance. The school houses seventh and eighth grade students and has a total enrollment of about 650 students. About 10% of the students have been found to be eligible for special education.

I teach three separate classes. The first two are 7th grade learning disabled, self contained English Language Arts classes while the third is an inclusive 7th grade English Language Arts class that is co-taught.

I chose three students from my classes. Student A is a seventh grade Caucasian male with the diagnoses of oppositional defiant disorder, attention deficient disorder, and learning disabled. Student B is a seventh grade Caucasian female with the diagnosis of learning disabled. Student C is an eighth grade African American female with the diagnosis of learning disabled.

Student A was chosen because he struggles with being prepared for class when the bell rings, copying his homework in his agenda, and staying on task for ten minute intervals. The class he is in consists of nine students, five boys (three Caucasian, two African American) and four girls (all Caucasian), on varying levels and with varying diagnoses. Theses diagnoses include: oppositional defiant, attention deficient, autism, and learning disabled.

Student B is was chosen because she struggles with independent reading comprehension, decoding of new words, and reading consistently for fifteen minutes. The class consists of twenty-six students: thirteen girls (ten Caucasian, two African American, and one Asian) and thirteen boys (nine Caucasian, two African Americans, two Indians). The class also consists of six special education students with disabilities including oppositional defiant, attention deficient, autism, and learning disabled. Another three of the twenty-six students are undergoing the IR&S process.

Student C was chosen because she struggles with social skills. They include: walking away when feeling angry, only taking out her phone at appropriate times, and staying on task in five minute intervals. She is being observed in her Learning Disabled English Language Arts Class. The class consists of six students, two boys (both African American) and four girls (three Caucasian and one African American). The students' diagnoses include: oppositional defiant, attention deficient, autism, and learning disabled.

Research Design and Procedure

In this study a multiple baseline single subject design was used in which the effectiveness of multiple self-management techniques on three individual students was evaluated.

Before the intervention began, students were observed on individual criteria as a baseline for their ability to self-monitor their learning. Student A was observed being prepared for class when the bell rings, copying his homework in his agenda, and staying on task for ten minute intervals. Student B was observed independent reading comprehension, decoding of new words, and reading consistently for fifteen minutes.

Student C was observed walking away when feeling angry, only taking out her phone at appropriate times, and staying on task in five minute intervals. As each strategy was taught and used, students will be observed using each technique to see if the behaviors being studied are improving after learning the self-monitoring strategies. The students were also asked for their opinions on whether the strategy helped him or her or not. Each strategy will be used for one week with a week of no strategy in between.

For this study the students used low tech and high tech procedures to increase self-monitoring behavior. One low tech strategy, one high tech strategy, and one combination strategy will be used. The study will answer two questions. The first is does teaching self-management strategies to students help increase their self-monitoring behavior. The second is what type of strategy helps students' best, low tech, high tech, or a combination of both.

Chapter 4

Results

In this single subject study, the effects of teaching self-management strategies to increase self-monitoring of specific behaviors were examined with three special needs students from two seventh grade English self-contained classrooms and one inclusion setting classroom were examined. The research questions to be answered were:

1. Are students who are taught self-management skills better able to monitor their own learning then students who are not taught the skill?

2. Does the use of self-monitoring applications improve a student's chance of becoming a better self monitor?

3. Are low tech or high tech self-management techniques better at helping students self-monitor?

The students were assessed based on teacher and self observations. The teacher assessed what skills each student needed to work on using self-monitoring and made a goal for each student. The students were then observed for a week to create a baseline. Then the students were taught one self-management strategy. They were observed by the teacher and asked to reflect on the technique. Then the students had another week off for a baseline and the process continued two more times. The three strategies used were a low-tech sticker chart, a low tech sticker chart along with a high tech timer, and the high tech application, MotivAider.

Overall each of the students made significant progress in self-monitoring using the self-management techniques. Table 1 below shows each student's goals, their baselines, and the improvements they made using each technique.

The students were measured on number of days that they were able to complete the task effectively based on teacher made observations and work completed. Each students worked more effectively using the strategies but not all students worked the best using the same strategies.

The first number in each table is based off of teacher observations. The second is based on the student's self-reflection of his or her work. Many times this reflection and the reality were very similar.

Student A

Table 1

Results for Student A

| Student	Baseline	Sticker Chart	Sticker chart and Timer	MotivAider	Percentage of Agreement
Student A: being prepared at bell	Teacher: 0 Student: 0	Teacher: 3 Student: 5	Teacher: 4 Student: 4	Teacher: 2 Student: 0	78%

Student	Baseline	Sticker Chart	Sticker chart and Timer	MotivAider	Percentage of Agreement
Student A: Copying homework without being asked	Teacher: 0 Student: 5	Teacher: 5 Student: 5	Teacher: 5 Student: 5	Teacher: 0 Student: 0	80%
Student A: Staying on task consistently for ten minutes	Teacher: 2 Student: 0	Teacher: 3 Student: 0	Teacher: 5 Student: 2	Teacher: 1 Student: 0	60%

Table 1 (Continued)

Student A was chosen because he struggles with being prepared for class when the bell rings, copying his homework in his agenda, and staying on task for ten minute intervals. He is diagnosed with oppositional defiant disorder and attention deficient hyperactivity disorder.

Figure 1 shows the progress Student A made using each strategy in his first goal, being prepared at the bell. The blue line represents the teacher's observations while the red line represents the student's self-interpretation. As table 1 and figure 1 show after being taught each self-management strategy, Student A improved but the most

improvement was shown using the timer and sticker chart combination. There was also a 78% agreement in how the teacher perceived the student doing with the goal and how the student perceived his achievement of the goal.
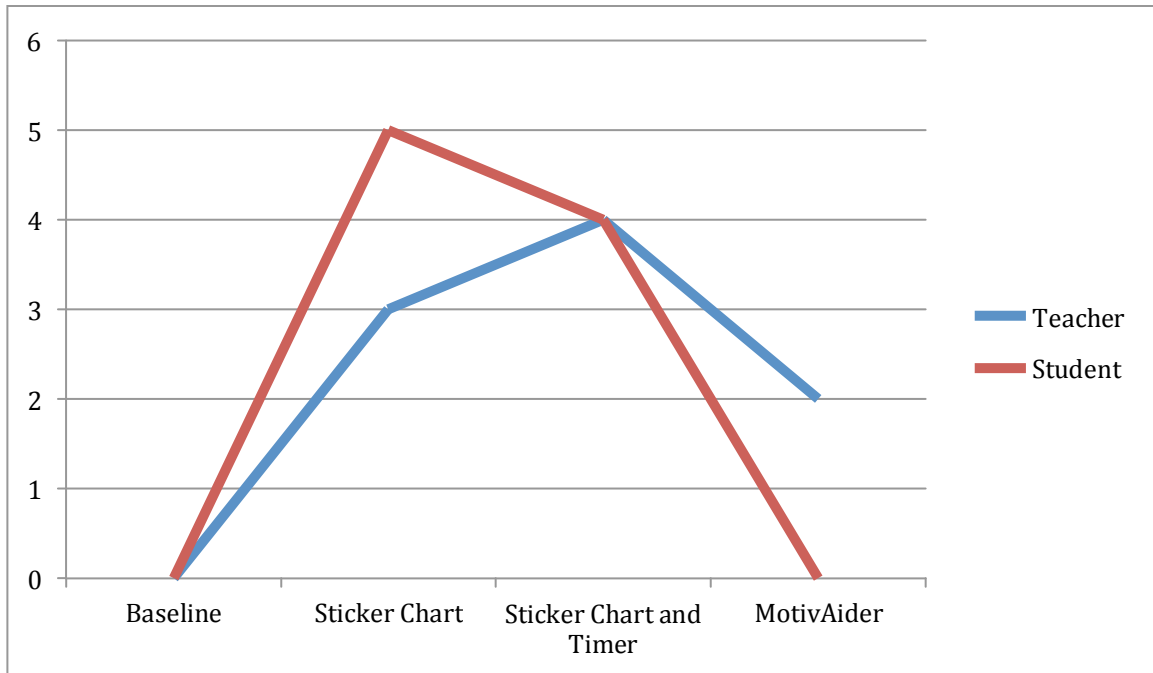
Figure 1. Results for Student A for Goal 1

Figure 2 shows the progress Student A made using each strategy in his second goal, copying homework without being asked. The blue line represents the teacher's observations while the red line represents the student's self-interpretation. As table 1 and figure 2 show that Student A only improved using the sticker chart and sticker chart with timer strategies. He did not improve using the MotivAider strategy. He actually did worse than the baseline using this strategy. There was also an 80% agreement in how the teacher perceived the student doing with the goal and how the student perceived his achievement of the goal.
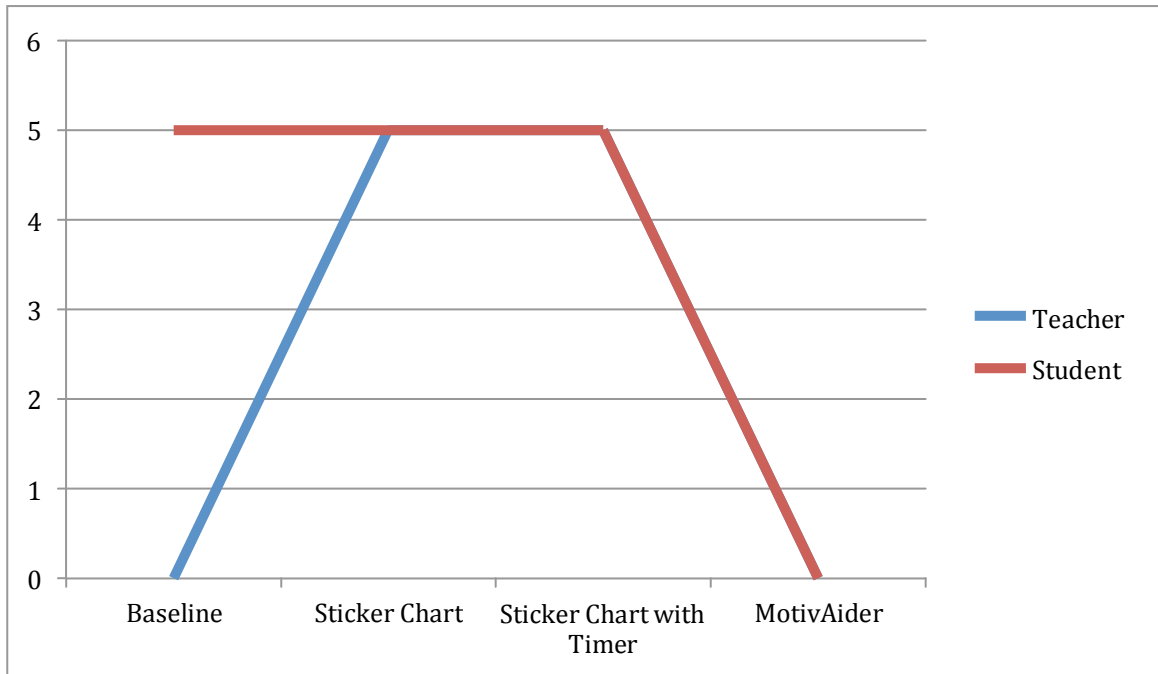
Figure 2. Results for Student A for Goal 2

Figure 3 shows the progress Student A made using each strategy in his third goal, staying on task consistently for ten minutes. The blue line represents the teacher's observations while the red line represents the student's self-interpretation. As table 1 and figure 3 show the student again only improved using the sticker chart and sticker chart with timer strategies. He again did not do better than the baseline using the MotivAider strategy. There was also a 60% agreement in how the teacher perceived the student doing with the goal and how the student perceived his achievement of the goal.
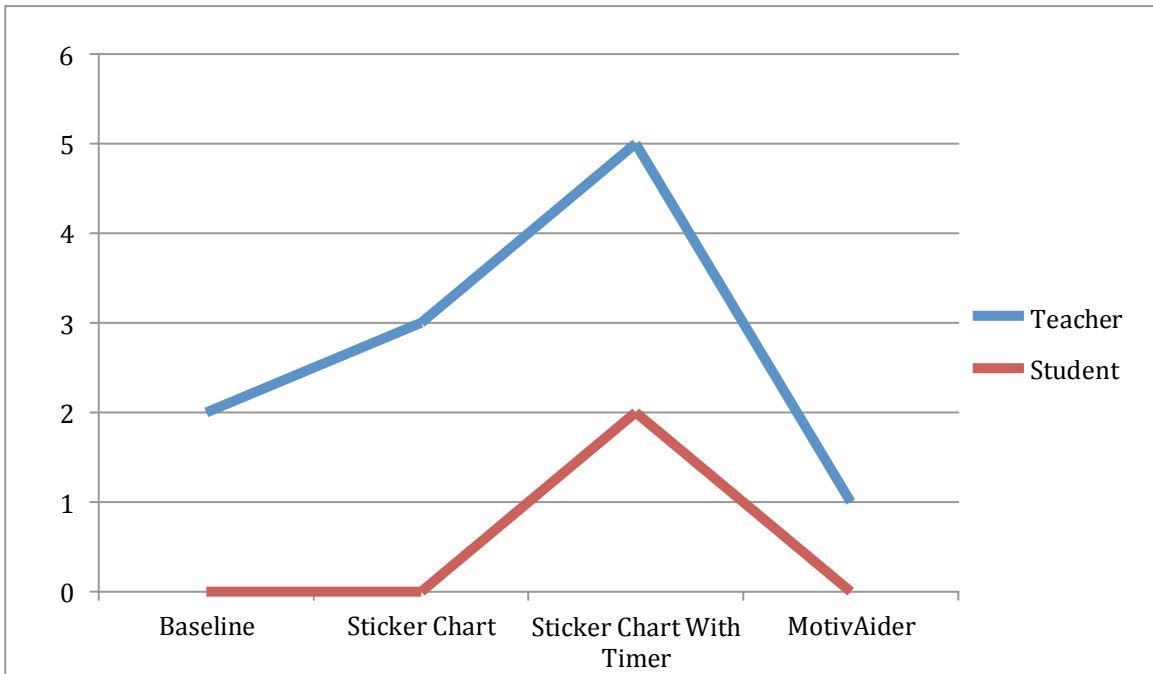
Figure 3. Results for Student A for Goal 3

Student A struggled greatly with being prepared at the bell. Out of five days he was not prepared a single day before being taught the self-management strategies. Using the sticker chart strategy he was observed by the teacher being prepared at the bell three out of five days while he self identifies as being prepared all five days. Using the sticker chart and timer combination he was observed by the teacher being prepared at the bell four out of five days. He also self identifies as being prepared four out of five days using this strategy. Using the MotivAider strategy he was observed being prepared at the bell only two out of five days. He self identified as not being prepared any day that week.

Copying down homework without being asked was also a struggle for this student. Out of five days he did not copy down his homework without being asked a single day although he self identified as doing this twice during the five days before the strategies were introduced. Using the sticker chart strategy, he was observed by the teacher and self

identified as being able to copy down his homework without being asked all five days. Using the combination of the sticker chart and the timer he was observed by the teacher and self identified as being able to copy down his homework without being asked all five days. Using the MotivAider strategy he was unable to be observed or self identify as copying down his homework without being ask any of the five days of observation.

Staying on task for ten minutes was what the student struggled least with. At the baseline he was observed two out of five days being able to stay on task for ten minutes although he self identified as not being able to stay on task for ten minutes any of the five days. Using the sticker chart strategy the teacher was able to observe the student staying on task for ten minutes three out of five days although again he self identified as not being able to do this at all. Using the combination of the sticker chart and timer the teacher observed the student staying on task for ten minutes all five days while he only self identified as being able to do this two out of five days. Using the MotivAider strategy he was observed by the teacher only one out of five days being able to stay on task for ten minutes. He self identified as not being able to do this at all using this strategy.

 Overall for this student the low tech and low tech / high tech combination seemed to work best. He would get very distracted by the MotivAider application because it would need to sit on the desk. I found that he would want to play with the application instead of staying on task. I found the same issue with the timer but that I was able to move away from him to keep it from being a distraction.

It was also clear that this student's self perception is very off. He believed that he did well in areas he struggled in and vice versa. I do believe that this and his lack of ability to

use the application without distraction are due to his oppositional defiant disorder and attention deficit hyperactivity disorder classifications.

Student B

Student B was chosen because she struggles with independent reading comprehension, decoding of new words, and reading consistently for fifteen minutes. She is diagnosed with a specific learning disability.

Table 2

Results for Student B

| Student	Baseline	Sticker Chart	Sticker chart and Timer	MotivAider	Percentage of Agreement
Student B: Can read and comprehend what was read on each page using close reading strategies	Teacher: 2 Student: 2	Teacher: 4 Student: 4	Teacher: 4 Student: 4	Teacher: 5 Student: 5	100%

Student	Baseline	Sticker Chart	Sticker chart and Timer	MotivAider	Percentage of Agreement
Student B: Can decode unknown words while reading using tools and not the teacher	Teacher: 0 Student: 5	Teacher: 3 Student: 5	Teacher: 5 Student: 5	Teacher: 5 Student: 5	70%
Student B: Reading without interruptions for fifteen minutes	Teacher: 3 Student: 0	Teacher: 4 Student: 4	Teacher: 5 Student: 5	Teacher: 5 Student: 5	91%

Table 2 (Continued)

Figure 4 shows the progress Student B made using each strategy in her first goal, can read and comprehend what was read on each page using close reading strategies. The blue line represents the teacher's observations while the red line represents the student's self-interpretation. As table 1 and figure 4 show using the self-management strategies the student improved her ability to read and comprehend what was read on each page using close reading strategies. Her largest improvement was made using the MotivAider
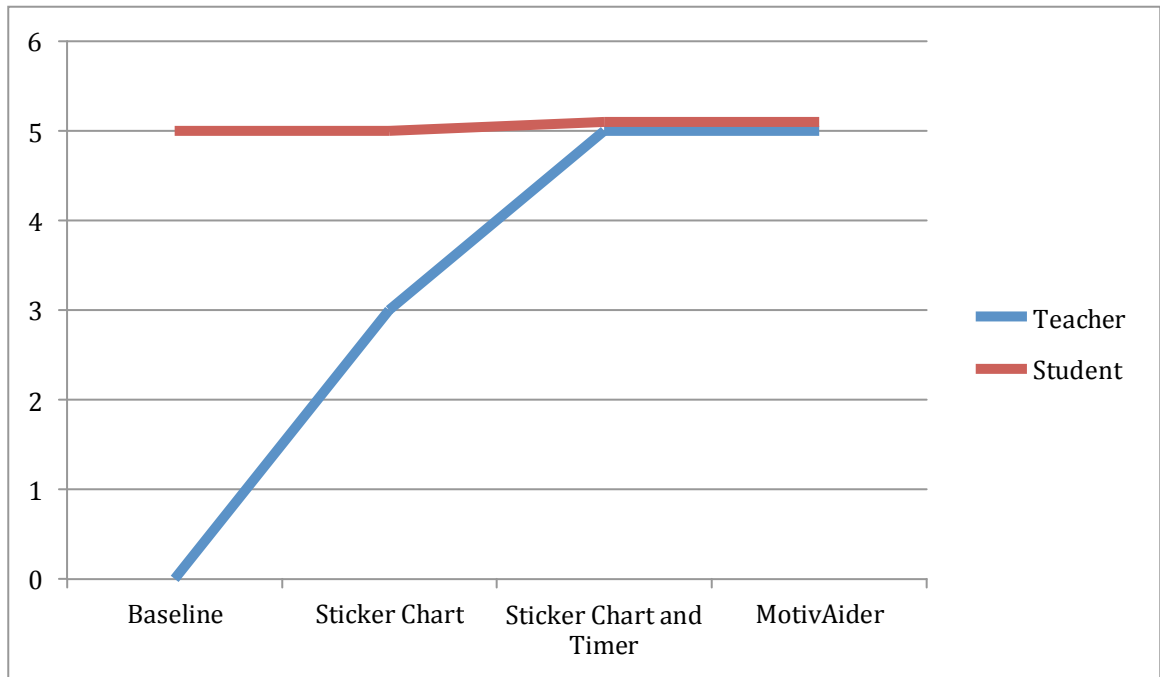
strategy and she had equal improvement using the sticker chart and sticker chart with timer strategies. There was also a 100% agreement in how the teacher perceived the student doing with the goal and how the student perceived her achievement of the goal.
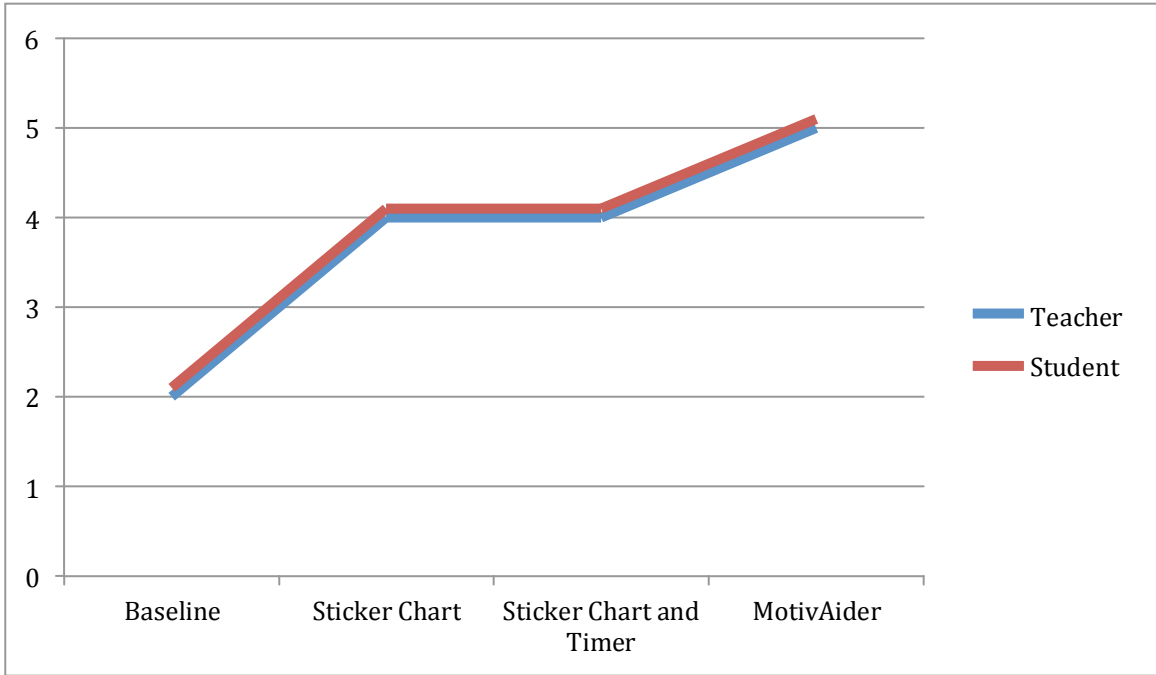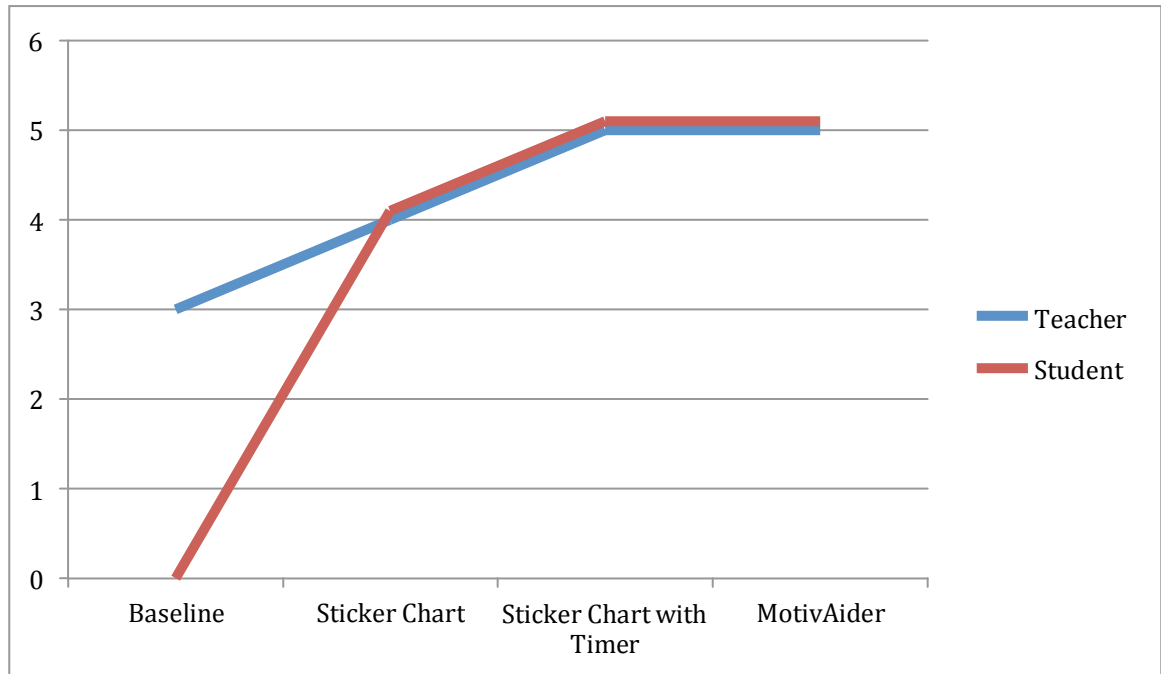

Figure 4 Results for Student B for Goal 1

Figure 5 shows the progress Student B made using each strategy in her second goal, can decode unknown words while reading using tools and not the teacher. The blue line represents the teacher's observations while the red line represents the student's self-interpretation. As table 1 and figure 5 show using the self-management strategies the student decoded unknown words while reading using tools and not the teacher. Her largest improvement was made using the sticker chart and timer combination MotivAider strategies but she also had improvement using the sticker chart strategy. There was a 91% agreement in how the teacher perceived the student doing with the goal and how the student perceived her achievement of the goal.

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Figure 5 Results for Student B Goal 2

Figure 6 shows the progress Student B made using each strategy in her third goal, reading without interruptions for fifteen minutes. The blue line represents the teacher's observations while the red line represents the student's self-interpretation. As table 1 and figure 6 show using the self-management strategies the student was able to read without interruptions for fifteen minutes. Again, her largest improvement was made using the sticker chart and timer combination MotivAider strategies but she also had improvement using the sticker chart strategy. There was a 70% agreement in how the teacher perceived the student doing with the goal and how the student perceived her achievement of the goal.

Figure 6 Results for Student B for Goal 3

Student B struggled greatly with reading and comprehending what was read on each page using close reading strategies. Out of five days she was only able to read and comprehend what was read on each page using close reading strategies two out of five days before being taught the self-management strategies. She self identified as this being the case as well. Using the sticker chart strategy she was observed by the teacher being able read and comprehend what was read on each page using close reading strategies four out of five days and self identified with the same. Using the sticker chart and timer combination she was observed by the teacher being able to read and comprehend what was read on each page using close reading strategies four out of five days. She also self identifies as being able to read and comprehend what was read on each page using close reading strategies four out of five days using this strategy. Using the MotivAider strategy

she was observed being able to read and comprehend what was read on each page using close reading strategies five out of five days. She self identified with the same.

She struggled the most with decoding unknown words while reading using tools and not the teacher. Out of five days she was unable to decode unknown words while reading using tools and not the teacher any of five days before being taught the self-management strategies. She self identified as this being able to do this all five days. Using the sticker chart strategy she was observed by the teacher being able to decode unknown words while reading using tools and not the teacher three out of five days and self identified as being able to do this five out of five days. Using the sticker chart and timer combination she was observed by the teacher being able to decode unknown words while reading using tools and not the teacher five out of five days. She also self identifies as being able to decode unknown words while reading using tools and not the teacher five out of five days using this strategy. Using the MotivAider strategy she was observed being able to decode unknown words while reading using tools and not the teacher five out of five days. She self identified with the same.

Her least struggle was with reading without interruptions for fifteen minutes. Out of five days she was able to read without interruptions for fifteen minutes three days before being taught the self-management strategies. She self identified as not being able to do this at all. Using the sticker chart strategy she was observed by the teacher reading without interruptions for fifteen minutes four out of five days and self identified as the same. Using the sticker chart and timer combination she was observed by the teacher reading without interruptions for fifteen minutes four out of five days. She also self identifies as being able to read without interruptions for fifteen minutes four out of five

days using this strategy. Using the MotivAider strategy she was observed reading without interruptions for fifteen minutes five out of five days. She self identified with the same.

Overall for this student the low tech / high tech combination and high tech options seemed to work best. She enjoyed hearing the timer and feeling the vibrations. These helped keep her on task. The sticker chart often got lost on her desk under a pile of papers. This would frustrate her as she worked. It was also clear that this student's self perception is very on in most areas. For the most part she knew what she did well on and what she did not.

Student C

Student C was chosen because she struggles with social skills. They include: walking away when feeling angry, only taking out her phone at appropriate times, and staying on task in five minute intervals.

Table 3

Results for Student C

Student	Baseline	Sticker Chart	Sticker chart and Timer	MotivAider	Percentage of Agreement
Student C: walking away when angry	Teacher: 0 Student: 2	Teacher: 3 Student: 3	Teacher: 4 Student: 4	Teacher: 5 Student: 5	92%

Student	Baseline	Sticker Chart	Sticker chart and Timer	MotivAider	Percentage of Agreement
Student C: Only having her phone out during appropriate times	Teacher: 1 Student: 5	Teacher: 3 Student: 5	Teacher: 5 Student: 5	Teacher: 3 Student: 5	79%
Student C: Staying on task in five minute intervals	Teacher: 2 Student: 5	Teacher: 3 Student: 5	Teacher: 5 Student: 5	Teacher: 5 Student: 5	86%

Table 3 (Continued)

Figure 7 shows the progress Student C made using each strategy in her first goal, walking away when angry. The blue line represents the teacher's observations while the red line represents the student's self-interpretation. As table 1 and figure 7 show using the self-management strategies the student was able walk away when angry. Her largest improvement was made using MotivAider strategy but she also had improvement using the sticker chart and combination sticker chart and timer strategies. There was a 92% agreement in how the teacher perceived the student doing with the goal and how the student perceived her achievement of the goal.
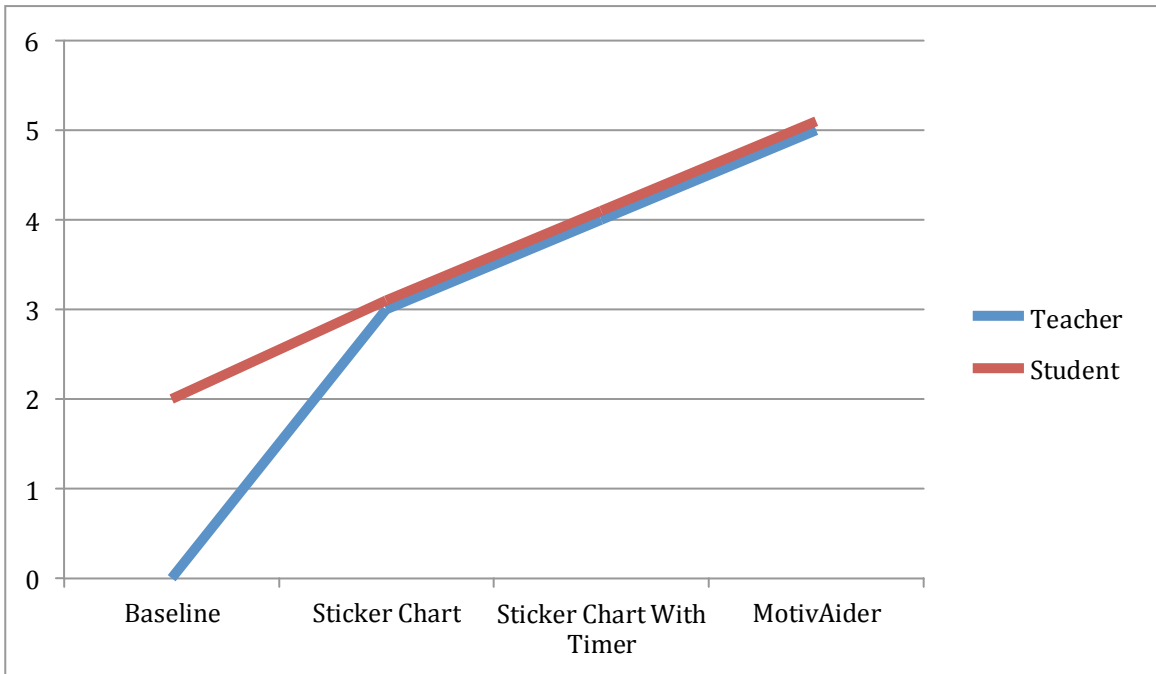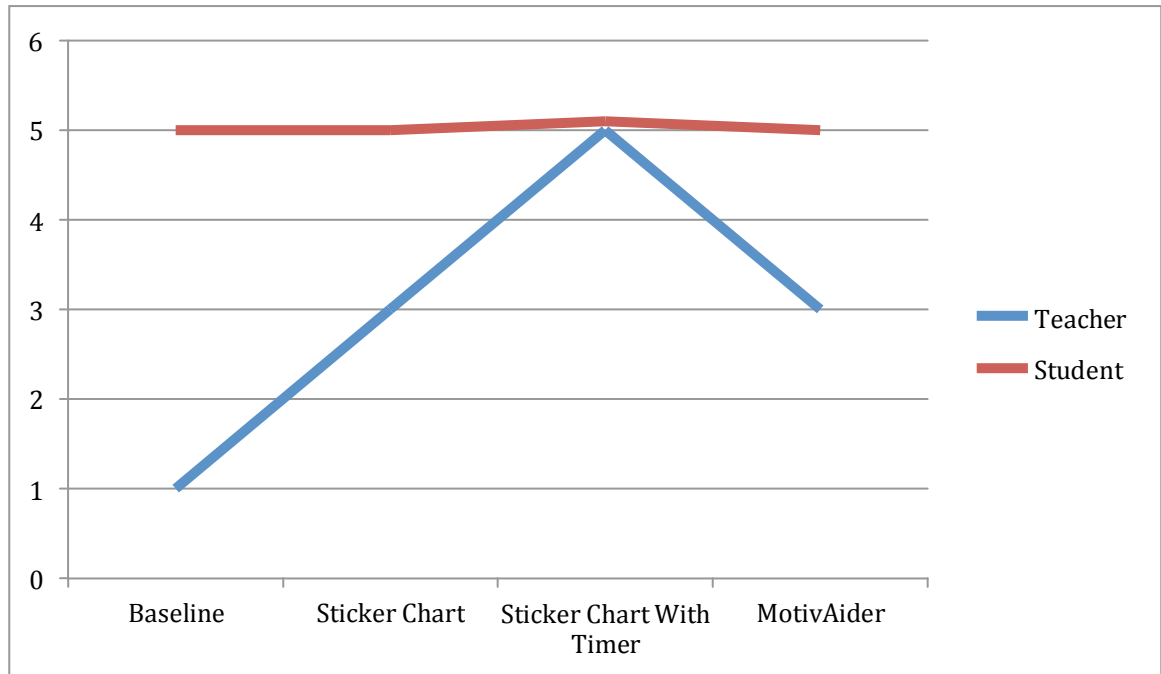
Figure 7. Results for Student C for Goal 1

Figure 8 shows the progress Student C made using each strategy in her second goal, only having her phone out during appropriate times. The blue line represents the teacher's observations while the red line represents the student's self-interpretation. As table 1 and figure 8 show using the self-management strategies the student was able to only have her phone out during appropriate times. Her largest improvement was made using the combination sticker and timer strategy but she also had improvement using the sticker chart and MotivAider strategies. There was a 79% agreement in how the teacher perceived the student doing with the goal and how the student perceived her achievement of the goal.

Figure 8. Results for Student C for Goal 2

Figure 9 shows the progress Student C made using each strategy in her third goal, Staying on Task for Five Minute Intervals. The blue line represents the teacher's observations while the red line represents the student's self-interpretation. As table 1 and figure 8 show using the self-management strategies the student was able to stay on task in five minute intervals. Her largest improvement was made using the combination sticker chart and time and MotivAider strategies but she also had improvement using the sticker chart strategy. There was an 86% agreement in how the teacher perceived the student doing with the goal and how the student perceived her achievement of the goal.
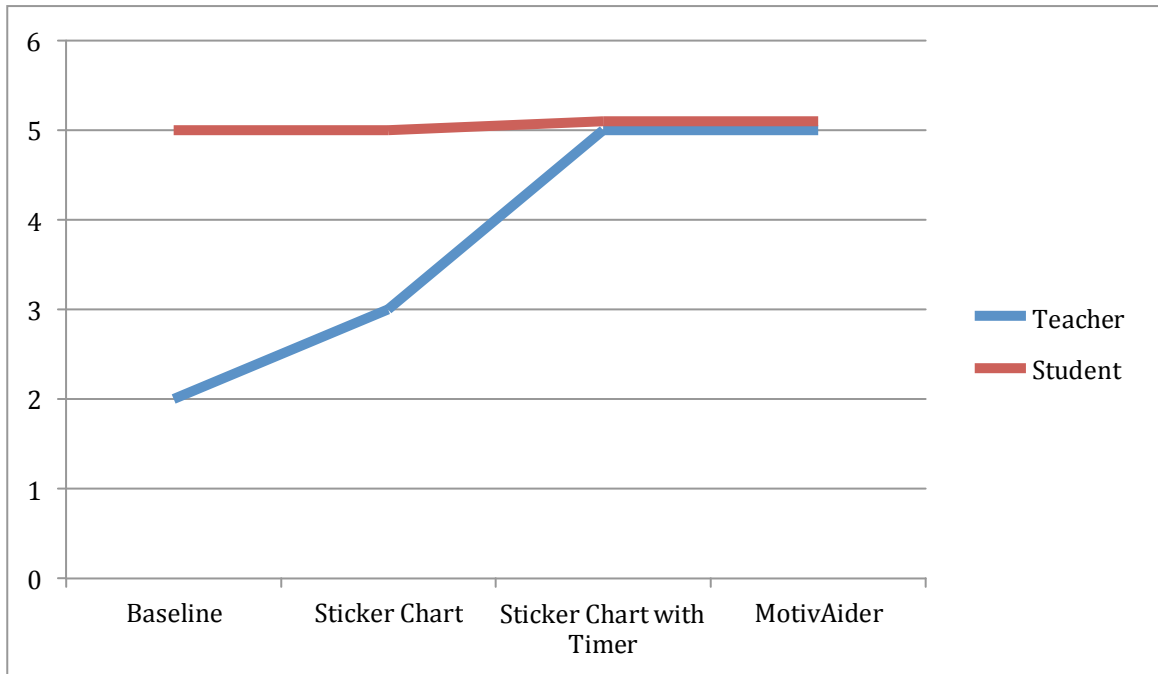
Figure 9. Results for Student C for Goal 3

Student C struggled greatly with walking away when angry. Out of five days she was not able to walk away when angry at all before being taught the self-management strategies. She self identified as being able to do this two out of five days though. Using the sticker chart strategy she was observed by the teacher being able to walk away when angry three out of five days and self identified with the same. Using the sticker chart and timer combination she was observed by the teacher being able to walk away when angry four out of five days. She also self identifies as being able to walk away when angry four out of five days using this strategy. Using the MotivAider strategy she was observed being able to walk away when angry five out of five days. She self identified with the same.

Another struggle was using her cell phone only at appropriate times. Out of five days she was only observed being able to do this once by the teacher. She self identifies as

being able to do this everyday. Using the sticker chart strategy she was observed using her cell phone only at appropriate times three out of five days and self identified again with five out of five. Using the combination sticker chart and timer strategy she was observed using her cell phone only at appropriate times five out of five days and self identified the same. Using the MotivAider strategy she was observed using her cell phone only at appropriate times three out of five days but again self identified as five out of five.

The least of Student C's struggles was staying on task in five minute intervals. Out of five days she was observed being able to do this two days before being taught the self management strategies. She self identified as being able to do this five out of five days. Using the sticker chart strategy she was observed staying on task in five minute intervals three out of five days although she again self identified as being able to do this five out of five days. Using the combination sticker chart and timer strategy she was observed staying on task in five minute intervals five out of five days and self identified as the same. Using the MotivAider strategy she was again observed staying on task in five minute intervals five out of five days and again self identified this.

Overall for this student the low tech / high tech combination and high tech options seemed to work best as well. She also enjoyed hearing the timer and feeling the vibrations. These helped keep her on task too. The sticker chart often got lost on her desk under a pile of papers also. This would frustrate her as she worked. It was also clear that this student's self perception is sometimes accurate and other times very off. As she learned more strategies her perception got better though.

Chapter 5

Discussion

This study examined the effects of teaching self-monitoring strategies to students with a variety of disabilities to increase their ability to self manage their learning and behaviors. Based on teacher observations, three skills were identified as intervention targets for each student. Although the skills varied the intervention strategies were the same. Each participant was taught three self monitoring strategies: sticker chart, sticker chart with timer, and MotivAider. The sticker chart was a low tech strategy while the sticker chart with timer was a combination strategy, and MotivAider was a high tech strategy.

Each participant was observed one week without any strategies and then taught a new strategy and observed for a week using that strategy. The students as well as the teacher were asked to identify if the strategy helped the student or not. The results indicated that no single strategy was the most effective but that different strategies worked for different students.

Student A made his greatest strides using a combination of the high and low tech strategies. He improved greatly in all three areas he was observed in. His largest improvements were made in copying his homework without being asked and staying on task. The student is currently able to use the self monitoring strategies 80% of the time independently. On occasion he needs to be reminded to use them but most of the time he is able to monitor himself without prompting.

Student B made her greatest strides in both the combination strategy and the high tech strategy. She also improved greatly in all areas observed but improved the most in decoding unknown words while reading using tools and not the teacher and reading without interruptions for fifteen minutes. The student is currently able to use the self monitoring strategies 99% of the time independently. She rarely needs to be reminded to use them but most of the time she is able to monitor herself without prompting.

Student C made her greatest strides in both the combination strategy and the high tech strategy as well. She also improved greatly in all areas observed but improved the most in staying on task for five minute intervals. The student is currently able to use the self monitoring strategies 70% of the time independently.

Although the results indicate that teaching self-monitoring strategies to students with a variety of disabilities can increase their ability to manage their learning and behaviors, students preferred different methods for self-monitoring. For example, student A had a very difficult time working with the sticker chart and timer (combination) and MotivAider (high tech) strategy. This student has significant difficulty focusing his attention. It appeared that the use of a timer or application made him focus on that and not the task at hand. The low-tech strategy was not as distracting for him and he was able to work better using it. In contrast the other two students, who did not have attention disorders and instead had a learning disability and emotional disturbance respectively, did much better with the combination and high tech strategies. It may be that they were less distracted by these methods.

Limitations

During the study, all participants displayed increases in their self management of learning but not in the same ways. Some students preferred the low tech strategies while others the combination and or high tech strategies. The biggest limitation in the study was sample size. Ipads are not used on a daily basis at the school and an ipad was needed to run the MotivAider application. With only one ipad in the classroom it was impossible to have more than one student a class be in the study.

Also, the students were all from the same district so were all about the same socio-economic status. With a bigger sample size and a more diverse population the results may have come out much different.

Practical Implications

Students who acquire skills in self-managementwill be able to use the strategies they learned in this study the rest of their lives. As they get older less and less adults will be telling them to stay on task. It will be more expected. Knowing how to monitor ones own work will help these students become more productive members of society.

There are also many implications for the classroom. To begin teaching students self-monitoring strategies, a teacher must first know his or her students for the lessons to be effective. If a child is easily distracted by technology than a high tech strategy is not for him or her. Teachers should teach a variety of methods to their students but should really match the strategies to the student population. Not every method works for every student. Knowing your students and being patient with the strategies will help every student succeed.

Future Studies

Future research should study the effectiveness of self-monitoring strategies over a longer period of time. The students should be taught the strategies and then left alone for a month to see if they can put them into effect. This will help identify if the strategies are sticking for longer that just when they are being taught. Also a larger, more diverse sample size should be used.

Conclusion

This study sought out answers to the questions: Are students who are taught self-management skills better able to monitor their own learning then students who are not taught the skill? Does the use of self-monitoring applications improve a student's chance of becoming a better self-monitor? Do high or low tech strategies help students manage their learning and behavior the best?

After doing the research it is clear that students who are taught self monitoring skills are better self managers. Each participant made strides in their self management that will hopefully help them the rest of their lives. The low and high tech effectiveness is individual to the child. Teachers just need to find what strategy works best for his or her students.

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