Friends with Autism: A Comprehensive Approach to Building Social Skills among Students with Autism and an At-Risk Peer in the General Education Classroom

by

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ABSTRACT

The rise in the number of students found to have autism has been staggering over the past ten years. Accommodating these students effectively and appropriately in a public school is a challenge many teacher are deemed with, sometimes without adequate training. This study was aimed at affecting the underlying social misunderstandings inherent to students with Autism Spectrum Disorder and an at-risk general education peer through a comprehensive intervention consisting of peer mentoring, interactive social stories and video modeling strategies. Observations, student interviews, vignettes and student and researcher journals served as data sources. Three fourth grade boys, including a student with autism, a peer with behavioral concerns and a model peer, participated in an intervention designed using a multiple baseline across behaviors. The target students, including the student with autism and the peer with behavioral concerns increased their ability to demonstrate three distinctive skills, attending to task, raising hand and academic responding. Analysis of the data also showed an overall increase in levels of engagement and motivation. Strong friendships developed among all three participants. Implications suggest that a comprehensive approach is effective in reducing unwanted social behaviors and promoting positive social skills and gives further insight into the target students' motivation.

DEDICATION

The journeys we go through in life are never in solitude. Many individuals contributed to this doctoral venture alongside me, making this accomplishment just as much theirs as it is mine. For this reason, this section is to express my deepest and most sincere gratitude to those specific individuals whose love and support made this experience possible.

"I can do all things through Christ who strengthens me." –Philippians 4:13

When in doubt and confusion it is Christ that compels me to find inner strength and perseverance to keep doing His will. Infinite praise and thanks goes to my Lord who has blessed me beyond measure and has led me down this path. All glory and honor goes to Him first and foremost.

"What greater thing is there for human souls than to feel that they are joined for life - to be with each other in silent unspeakable memories."

-George Eliot

To my husband and best friend, Adrian, who has been the rock and anchor that has kept me sane throughout this entire experience: There are no words to describe my love and admiration for you; your calmness, patience and unwavering support, encouragement and friendship give me renewal and confidence to get through anything, including those long nights spent obsessing and writing. You have undoubtedly been the single, most influential, factor aiding me chiefly in this process, seeing that I was fed, comfortable and mentally refreshed every step of the way. I dedicate this work to you and I hope you know that this could not have been possible without you. Your love kindles

my heart and always provides me peace that makes me whole. Honey, **you** are my shining star always and forever.

"Science has established two facts meaningful for human welfare: first, the foundation of the structure of human personality is laid down in early childhood; and second, the chief engineer in charge of this construction is the family." - Meyer Francis Nimkoff

To my mother, Evelyn, who has instilled in me the work ethic and persistence needed in all my endeavors: your constant presence and imparted wisdom has been the source of motivation in all that I choose to do in my life; it is what fuels me to reach even beyond my own expectations. I can't even describe the role you have played in my life. You are the first person I seek for in times of celebration and advice; I am who I am because of you.

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and I am so proud of the woman you have become; you are a reason why I strive to be better.

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"The family is one of nature's masterpieces." - George Santayana

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students as they worked to rearrange their schedules to get them to the intervention sessions outside of school hours and worked to accommodate other siblings just so their children can participate in this study.

I must also acknowledge Paul Skiera, Chris Lamont and their ASU film crew for coordinating production of the interactive social story used in this study. Your team was able to take my mere script of a social situation and my mediocre acting and turn it into a working iPad application, complete with graphics and high caliber film that in turn were able to affect the further growth and social awareness of three particular students in this study. Not to mention, the group of students who got to be a part of the process and see the lights, cameras and exciting action of the whole production process (take after take). Thank you for your time and enthusiasm in this project.

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Congratulations!

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Chapter 1

INTRODUCTION, CONTEXT AND PURPOSE OF ACTION

One of the key challenges to overcome in any educational setting is sufficiently meeting the needs of each student. In a special education setting this challenge becomes more complex due to the wide array of needs a student may have. Additional needs may include development in several non-traditional skill sets such as areas relating to social awareness and self-control, depending on the nature of the disability. These non-traditional needs may also be in conjunction to the need for development in general skills related to math and reading, making the ability to meet their overall needs cumbersome for any teacher. The range of disabilities that continue to permeate each year may contribute greatly to the need for implementation of innovative strategies that will aide these students in school success. One of the specific disabilities that has shown the most proliferation among students has been autism spectrum disorder (ASD). Many times, students with ASD are unsuccessful in their studies due to a lack of social awareness or varying deficits in communication appropriateness. Treatment of social skills deficits remains one of the most challenging areas in meeting the needs of people with autism (Weiss and Harris, 2001). The lack of social awareness and communication skills may affect the students' ability to contribute in the classroom, especially when more and more in-class activities are aligned to meet language objectives, promoting discourse and collaboration among students.

The vast majority of students rarely receive any type of social coaching in communicative skills or social awareness, even though it may contribute greatly to their

overall academic success. It is implied that these skills will naturally develop, but for many students this serves as a precursor in further frustration and stress in the classroom. Students who qualify for speech and language service may receive some limited instruction in social conversation skills, but this service is usually not offered as a wide-ranging approach. This is usually due to pressure for students to be in the least restrictive environment, that is, with their general education peers, receiving general education curriculum, thus leaving limited time to thoroughly address crucial skills. Also, not all students with ASD will qualify for speech and language services. The need for increased social awareness and communication skills is apparent with many students with disabilities and some general education peers according to observations taken in general education classes (Kohler & Ezell, 1999).

Due to the overwhelming importance to academic curricula throughout the course of an academic year, social intervention programs may not be viewed as priority when they are implemented, lacking consistency and fidelity, possibly ending in a scanty approach that may not be effective. One intervention that combines components of discussion and social awareness strategies in a lesson is centered on the use of social stories. Social Stories are short stories that describe a situation or a behavior that may be ambiguous, confusing, or problematic for the individual (Gray & Garand, 1993). Gray and Garand (1993) developed social stories as a strategy with visual components (i.e., pictures or text), to address deficits in social skills for children with ASD.

Using social stories to support social awareness and communications skills is supported in published studies (Schneider & Goldstein, 2011). In a previous cycle of

action research conducted as a preliminary study and executed in a resource setting by this researcher, two students with autism and one general education peer with severe behavioral challenges participated in a five week study where each week one 25 minute session (outside of instructional hours) was devoted to discussing a special topic (e.g. respectful behavior to others and teachers) that was illustrated through a social story. A dialogue was facilitated and students were able to practice modeling the given topic. The three students also aided in making two social stories using their own names as characters. These sessions were supported by student and teacher interviews, observations and surveys throughout the week. The results indicated slight improvement in behaviors for students with Autism and moderate gains for the general education student.

The general education peer appeared to make the most growth in achieving the most socially respectful behavioral growth over the short course of the five weeks in the general education classroom. A non-disabled general education peer previously showcased immense acts of disrespect to peers and his teacher, including cursing, talking out loud, outward jokes and rude facial expressions imitating his teachers. During the course of the study this student proved to have no disciplinary referrals and spent less time on previously determined negative target behaviors. Also, his responses in interviews underwent an evolution illustrating his progression of pride in positive behavior over time. While some growth took place with the two students with autism, it was not substantial. This could be attributed to several drawbacks including lack of time, not enough sessions and possible lack of comprehensiveness of strategies. Since students

with ASD thrive on visual stimuli, integrating video interactive modeling may elicit a higher transferability to behaviors exhibited in the general education classroom.

Despite the short time of the pilot study, there were important implications for not only students with ASD but for general education peers needing support in socially appropriate behavior. This is the goal of the study herein; to test the effectiveness of a comprehensive method to social awareness including a unique approach to social stories, peer mentoring and vide modeling on at risk general education peers and those diagnosed with ASD.

Context

The U.S. Department of Education (2000) reported that the number of children with autism increased by 244% between 1993 and 1998 and continues to grow every year (Levy, Mandell & Schultz, 2009). With such an influx in the number of students being classified with autism, service providers are required to address the unique needs of this population more than ever (Levy et al., 2009). As Autism has been a growing challenge for the nation, it has also been a challenge, specifically, for teachers and students in Arizona. This research aims to provide support to particular teachers and students at a school located in Avondale, Arizona; a school where the Autism population has more than doubled between 2007 and 2012. Along with this sudden increase in the population of students with autism came flimsy approaches to behavior support and inadequate implementation of accommodations for these students due to lack of training for teachers. In turn, the proliferation of negative behaviors may manifest and deter academic success and create social challenges for the students.

Behaviors observed by teachers were defined and included yelling out at inappropriate times, disrespectful language to the teacher, inappropriate conversation topics with other students, incessant crying for long periods of time, throwing of items and banging head on the wall or desk. These behaviors were primarily observed and reported by teachers in the primary grades, kindergarten through third grade. Most behaviors seemed to stem from the students' lack of ability to communicate or verbalize needs properly and in an efficient manner. These behaviors served as antecedents for other negative behaviors among other general education peers as well. Several negative behaviors were being noted and observed by the same teachers for specific students in the class after such occurrences, such as disrespectful language toward the teacher, yelling out at inappropriate times, inappropriate discussions and language and occasional crying.

In an effort to address these behaviors, teachers were implementing targeted behavior plans and reward systems that were most often short-lived and not consistently followed. Moreover, none of the plans addressed specific areas of communication or social awareness, the two areas in which students with autism traditionally need the majority of support and intervention (Levy et al., 2009).

Purpose of Study

The primary purpose for this study was to improve desirable social behaviors and reduce inappropriate behaviors among one fourth grade student with autism and one fourth grade at-risk general education peer through the use of social stories, peer mentoring and video modeling. The overall objective was to foster a positive

environment for these students where they can ultimately devote more class time to their academics rather than behavior.

By learning how appropriate socialization looks and feels, the intent of this study was to ultimately teach students how to positively handle certain situations that are common to their classroom and decrease the amounts of negative behaviors interfering with their time on academics. Such behaviors in a classroom setting may include raising hands and staying seated in a chair. By learning and having the opportunity to practice social skills and communication, it was the intent of this study to impact further behaviors and assess for transferability of skills among environments, namely the resource room and their general education classroom. For these reasons the following questions were posed:

RQ1: What is the impact of a comprehensive approach including peer mentoring, interactive social stories and video modeling on student attention to task, appropriate hand raising, and initiating academic responses in a general education classroom for one student with autism and one general education at-risk peer?

RQ2: When participating in a comprehensive approach including peer mentoring, interactive social stories and video modeling, what are student perceptions on the behavioral effects?

Chapter 2

REVIEW OF SUPPORTING SCHOLARSHIP

This section outlines key social development theories relevant to all students and attempts to review the underlying themes regarding social awareness and motivation in students with autism. The approaches related to social integration and development are also outlined and discussed as related to previous studies.

Theory of the Mind

Premack and Woodruff (1978) defined theory of mind as the ability to impute mental states such as feelings, beliefs, intentions, and attitudes to oneself and to others. The ability to make inferences about what other people believe to be the case in a given situation allows one to predict what they will do.

In a study performed to outline the ability to do this, Premack and Woodruff (1978) set up variables in an effort to test whether students with autism were able to correctly answer questions related to others' point of view. The students with autism showed evidence of a deficit in the ability to appreciate the difference of their own knowledge and the knowledge of others (Premack & Woodruff, 1978). They concluded autistic children as a group fail to employ a theory of mind; and therefore, are at a grave disadvantage when having to predict the behavior of other people and, coincidentally apply those skills to aspects of communication and socialization (Premack & Woodruff, 1978; Baren-Cohen & Frith, 1985). By allowing students with Autism to observe and participate firsthand in demonstrating appropriate behaviors and giving them the

opportunity to discuss behaviors, as they relate to their own and to others, they may come to new understandings when involving the dynamics behind socialization.

Social Learning Theory

Bandura (1977) asserts most human behavior is learned observationally through modeling and imitation. From observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action (Bandura, 1977). By setting up variables to enable a student to observe a socially accepted behavior and then teaching them the skills necessary to emulate these behaviors while allowing a positive environment in which to practice could serve as an experiential guide for future situations. Bandura (1977) states continuous reciprocal interaction between cognitive, behavioral, and environmental influences aide in the development of human behavior patterns. Given Bandura's (1977) observation, the advantages of social modeling for typically developing children could generalize for students with autism when proper and deliberate behavior modeling by peers aides them to reproduce positive behaviors.

In an effort to assure observational learning, Bandura (1977) specifies several necessary conditions when modeling is taking place:

1. Attention: the amount of distinctiveness, affective valence, complexity, prevalence and functional value in the modeled events as well as the observers' characteristics. This includes personality, sensory capacities, past reinforcement and perceptual set will enhance the effects of learning through observation.

2. Retention: remembering what was said and done. This includes symbolic coding, mental images and cognitive organization of the material presented. The observer must develop a conscious awareness of the technique involved.
3. Motor reproduction: reproducing what was done. This includes self-observation of what was done and accurate feedback.
4. Motivation: having a valid and investing reason to imitate. These could include external imagined incentives, vicarious motives such as seeing and recalling the model and self-reinforcement.

Once these conditions have been satisfied, the following principles need to be acknowledged throughout the process. First, the highest level of observational learning is achieved by first organizing and rehearsing the modeled behavior symbolically and then enacting it overtly. The behavior could be first organized through a facilitated discussion that outlines the time and place for such behavior, and then enacted by deliberate practice of discussed actions. Coding modeled behavior into words, labels or images may yield better retention than simply observing (Bandura, 1973). Secondly, individuals are more likely to adopt a modeled behavior if it results in outcomes they value. Positive feelings and enhanced self-worth could be a valued outcome when students successfully demonstrate desired behaviors through video modeling, decreasing reliance on teacher prompts and increasing independence (Hodgon, 1995). Lastly, individuals are more likely to adopt a modeled behavior if the model is similar to the observer and has admired status and the behavior has functional value (Bandura, 1973).

Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influences and while environment causes behaviors, behaviors can also cause the environment (Bandura, 1977). This is evident in a classroom when a student chooses to demonstrate negative behaviors. Other students and teachers present can also start to feel frustrated affecting the overall learning environment.

Vygotsky (1978) argues that social interaction precedes development; consciousness and cognition are the end products of socialization and social behavior. With this there are three major themes present:

1. Social interaction plays a fundamental role in the process of cognitive development; first, on the social level (inter-psychological), and later, on the individual level (intra-psychological).
2. The More Knowledgeable Other (MKO) refers to anyone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept. The MKO is normally thought of as being a teacher, coach, or older adult, but the MKO could also be peers, a younger person, or even computers.
3. The Zone of Proximal Development (ZPD). The ZPD is the distance between a student's ability to perform a task under adult guidance and/or with peer collaboration and the student's ability to solve the problem independently. Learning occurs in this zone.

Social cognition must take place socially, among and with others then individually; giving time for the individual to see proliferation of the skills. This is most impactful, according to Vygotsky (1978) when a more knowledgeable companion(s) is present to coach and accompany the process. A student mentor can be used to peer model and coach and satisfy this process. Finally, through a specially designed format, students must be given time to develop individual skills and they must be given the opportunity to exhibit their newly learned skills on a more independent level. In an effort to create social consciousness and cognition among students with autism spectrum disorder, it is imperative that these conditions are present in any program looking to impact communication and social awareness.

Self Determination Theory

Deci and Ryan (2000) assert that human intrinsic and extrinsic sources of motivation impact social development and individual differences in ability to perform an activity. Self Determination Theory (SDT) further explains how social and cultural factors can facilitate or undermine someone's overall sense of initiative and well-being, thereby affecting their quality of performance. Therefore, if by allowing students a place to socially discuss behaviors and relate how they may be of value to them, students may begin to internalize a more intrinsic trajectory for their behaviors. Autonomy, competence and relatedness are argued to foster the most high quality forms of motivation (Deci & Ryan, 2000). These three components can influence performance and persistence to do better. The STD framework has behavior specific implications for understanding practices that enhance satisfaction and functions that follow from the

performance. Deci and Ryan (2000) state that all humans are active organisms with evolved tendencies toward growing and mastering challenges, while cultivating these new experiences into one coherent sense of self. Peer discussion and opportunities to watch and evaluate themselves and others may help cater to further growth and eventual mastery of behaviors. There are five mini-methods within the SDT Theory.

Organismic Integration Theory (OIT) addresses the topic of extrinsic motivation with properties, determinants and consequences. Extrinsic motivation is instrumental toward outcomes for a behavior. Extrinsic does not only mean physical, material consequences. In this study, extrinsic motivation primarily means social acceptance and may refer to outcomes such as grades, increased ability to accomplish a goal, etc. This study does not have any physical or material rewards that reinforce behaviors, rather, this research aims to affect motivation for exhibiting behaviors by attaching meaning for behaviors through peer discussion and inherent social acceptance that play as consequences for the behaviors. There are four distinct forms of instrumentality, of extrinsic motivation which fall along a continuum to internalization, or closest to true intrinsic motivation. The four subtypes of extrinsic motivation include:

1. External Regulation- This refers to any extrinsic motivation that is controlled by someone else; it includes a low sense of autonomy for the person performing. This is usually to satisfy a demand, or avoid undesirable consequences.

2. Introjection- On the continuum to autonomy, this aspect refers to performance of a task because of feelings of pressure or to avoid guilt or anxiety or to enhance pride and self-esteem.
3. Identification- In this subtype of extrinsic motivation, a student begins to identify with the value and personal meaning behind a learning activity and endorses its goals. The activity now becomes relevant to their interests and a connection can be made about the relevance of doing it.
4. Integration- This subtype shares the most intrinsic outcomes, it is characterized by a high level of autonomy and self-determination; the activity corresponds to one's values and *needs*. This is an ongoing process, social values and self-regulated behaviors become internalized over life in this part of the continuum.

The more internalized the extrinsic motivation, the more autonomous the person will be enacting the behaviors, moving closer to true internalization. Deci and Ryan (2000) further state that social contexts, or environments, can enhance or forestall the internalization process. Autonomy, however, is critical, and must be present, for a student to reach internalization.

Social Skills Instruction Using Video Models, Peer Mentors and Social Stories

Social Stories

A Social Story is a short, child specific situation presented in formats that show appropriate skills and social responses to people, events, and concepts (Gray, 2000). They are used to help a student understand the feelings and behaviors of others and provide

them with social cues in their ability to deal with these situations independently and appropriately (Gray & Garand, 1993). An intervention centered around implementation of social stories is designed to provide a person with autism with the social information they require to cope in a similar situation (Connor 2009). They have been used to decrease fear and aggression, introduce changes in routine, teach academic skills and teach appropriate social behavior. The social stories approach embraces learning styles and it is widely agreed that the use of visual support and visual teaching are, for many, effective intervention strategies (Connor, 2009). The social story approach embraces this particular style of thinking and learning and there is documented evidence that the use of social stories has grown in recent years. Many users of the approach can provide anecdotal evidence of its success.

Bledsoe, Myles and Simpson (2003) found that social stories improved lunchroom behaviors in a teenager with Asperger syndrome. They were able to show growth in the percentage of previously defined target behaviors during observational recordings by using ABAB research design. This method documented the change in behavior while the intervention was taking place and how the transferability of those skills manifested while interventions were not taking place. Baseline data was taken (A), then data was taken during the intervention (B), then the intervention was taken away and data was taken again (A). Finally, the intervention was reintroduced and data was taken once more (B).

Schneider and Goldstein (2011) assessed the effectiveness of social stories in isolation using a component analytic approach. Three kindergarten to fifth grade students

previously diagnosed with ASD who were demonstrating off task problem behaviors and impaired verbal or social communication took part in a study. The first component was to examine the effects of social stories alone. This was then used as a baseline to examine other strategies such as visual schedules. The participants were assessed using the *Social Skills Rating System* (SSRS; Gresham & Elliott, 1990) and *Oral and Written Language Scales* (OWLS; Carrow- Woolfolk, 1995). One Social Story was written for each child according to Gray's (1998) guidelines and included descriptive, perspective, and directive sentences. The Social Story included information about the targeted behavior and students were observed in their respective classrooms every ten seconds for one student and every 15 seconds for 5 minutes for the other two students. During baseline, each participant engaged in the regular classroom routine and during treatment the social stories were read to each participant immediately before the routine that was targeted. Several target behaviors were defined and designated for each student. Interventions were staggered to compare one participant as a control for another. When the effect was replicated across the three participants it was assumed that the classroom on-task behaviors could be improved using social stories, however, these results were impacted by adding additional strategies to compliment the social stories. It was also cited that integrating visuals would also place more gains in attaining a more consistent target behavior percentage.

For this study, the researcher was particularly interested in elevating the understanding of the students' perception of their own actions through social stories and visual, interactive means. Although social stories may yield some benefits, integrating

other visual stimuli may also increase the understanding of behavioral actions for the students participating in this study.

Peer Mentoring

Another aspect of social skill instruction includes using peer mentors to aid in the further demonstration and discussion of appropriate behaviors and communication in the classroom. Much research addresses the benefits of allowing peer integration and training to help motivate and model effective behavior skills for students with disabilities (Carter, Cushing, Clark & Kennedy, 2005; Bellini & Akullian, 2007; McEvoy, Shores, Wehby, Johnson & Fox, 1990; Thiemann & Goldstein, 2004). Peer mentoring is defined by Carter, Cushing, Clark and Kennedy (2005) as an intervention that involves one or more peers without disabilities providing academic and social support to a student with disabilities, this may include role-playing social situations and video modeling. Using video models and peer mentors to provide real life examples of the desired skills takes the mystery out of some facets of social interaction and creates concrete visuals while providing increased chances for social engagement (Bellini & Akullian, 2007).

McEvoy, Shores, Wehby, Johnson and Fox (1990) showed that the benefits of peer training can go beyond just tolerance and behavior improvements for those with disabilities. While students with disabilities who were paired with others that had been peer trained showed the most progress in building social interaction skills over time, general education peers placed in a position of leadership also tended to improve in their own behaviors. Consistent implementation in teaching, planning and monitoring

procedures to promote social interaction resulted in greater increases in all children's interactions, disabled and nondisabled.

When coupling peer mentoring with written text cues, Thiemann and Goldstein (2004) examined (a) the effects of peer training on the focus children's overall rates of social interaction and (b) the effects of systematic instruction using written text cues on specific social communication skills. A multiple baseline, across participants design was used to evaluate effects of peer training on the overall rates of interaction. Second, a multiple baseline, across social-communication skills design replicated across the triads formed was used to measure the effects of the written text cues on social-communication initiations. For four children with autism, three targeted communication skills were assessed. Students showed some growth with only the written text cues given for their targeted skills, however, when paired and assessed with peer mentoring strategies, targeted skills were evident at a much higher rate (Thiemann & Goldstein, 2004).

Delano and Snell (2011) also studied the use of peer mentors and social stories. A multiple-probe design across participants was used to evaluate the effects of social stories on the duration of appropriate social engagement and the frequency of four social skills in three elementary-age students with autism. The social skills were seeking attention, initiating comments, initiating requests, and making contingent responses. Following the intervention, which consisted of reading individualized social stories, answering comprehension questions, and participating in a 10-min play session, the duration of social engagement increased for all 3 students with both a training peer and a novel peer. The duration of the amount of time devoted to appropriate behavior in social engagement

and increasing frequency to these behaviors were goals of the study. Peer brainstorming was conducted with each pair of students and a question was posed seeking the target behavior as a response. There were observed sessions in the general education class. All three participants showed an increase in the duration of time they spent socially engaged with both a training peer and a novel peer in the intervention setting. Two of the students also showed remarkable growth in their general education classrooms very close to those of their nondisabled peers.

Video Modeling

Among the challenges educators must face when attempting to academically educate a student with a disability, teaching situational wisdom and appropriate modes of dealing with frustration are most challenging, especially when the student is dealing with confusion related to socialization, communication and repetitious behavior. Video based interventions such as video modeling may hold insight into how to effectively handle the behavioral disconnect between social confusion as they have demonstrated to be effective with students with autism spectrum disorder (Ganz, Earles-Vollrath & Cook, 2011). Video self-modeling refers to the video modeling and observation of oneself, while video modeling is the modeling and observation of others on video. In addition to aiding in the learning of social objectives, video modeling has shown to also address behavioral, self-help and communication objectives (Ganz et al., 2011). Because students with ASD learn best through visual means, visually based approaches including video modeling may help address pervasive difficulties. Video modeling has been shown, along with the simultaneous implementation of using others to demonstrate behaviors, to increase

appropriate social initiation and interaction, improve conversational skills and decrease problem behavior (Ganz et al., 2011). Most newly learned skills were also maintained over time and could be generalized to new settings and with new adults over time (Ganz et al., 2011).

Studies testing the effectiveness of both peer and self-modeling using video recording, showed the benefits of using such an intervention. When applying a combination of a single participant multiple baseline design and alternating treatment designs Sherer, Pierce, Paredes, Kisacky, Ingersoll and Schreibman (2001) investigated outcomes that aided in positive treatments to determine faster skill acquisition and compare the effectiveness of several video model approaches. Children with ASD between three and eleven years old were chosen particularly for their delays in maintaining social conversation. Target conversational skills and desired correct responses to were defined by the researchers and parents. During the intervention, children were video-taped and correct and incorrect responses were recorded while a second observer recorded the data. Baseline data was taken at the beginning of the study by asking the children to answer a set of questions. Videos were taken of the children in both video modeling strategies, including self-video modeling and peer modeling. Children then watched a designated video a specific amount of times before going to bed. The videos were alternated throughout the study. Scherer et al. (2001) found video modeling to be an effective approach to social skill acquisition although the approach to video modeling, whether it was self or peer modeling, did not show much variance to overall skill acquisition.

In another study, acquisition of communication skills were assessed using a multiple baseline across subjects design to determine whether a video modeling procedure could increase appropriate verbal responses during play for students between the ages of seven and 12 previously diagnosed with ASD (Buggey, Toombs, Gardener & Cervetti, 1999). Students were asked to watch video demonstrating correct verbal responses during a game. Correct responses were defined as a response directly related to the question and all students were found to increase their baseline percentages in responses by significant amounts, therefore, concluding video modeling to be effective in teaching verbal responding.

Scattone (2008) combined video modeling with social stories to assess conversational skills of a student with Asperger Syndrome. Desired outcomes, defined as eye contact, smiling, and questioning or comments, were recorded through observations. Social stories were developed specifically for these outcomes and then video modeling was shown to the student depicting two adults modeling appropriate behaviors similar to the same skills referred to in the social story. Results showed benefits for the student with ASD in learning and maintaining new behavior when video modeling was combined with social skill instruction as all target behaviors increased in conversational observations.

Comprehensive Approach

While many studies have researched the effects of interventions done in isolation, few have integrated various interventions into one cohesive approach. Goldstein and Schneider (2011) tested the effectiveness of using social stories while McEvoy et al.

(1990) studied peer mentoring and Ganz et al. (2011) studied the effects using various measures when implementing video modeling. While each yielded positive results, it is possible that bringing these interventions together in a comprehensive approach and measuring effectiveness in sequence may bring new insight into how these interventions can impact the development of specific skills.

Few interventions have implemented social stories in conjunction with peer and video self-modeling. McEvoy et al. (1990) measured the progress made when pairing students with disabilities with non-disabled peers who had been peer trained. Ganz et al. (2011) used video modeling to self-help students in isolation and without prior discussion using social stories. Sherer et al. (2001) also used video modeling and aspects of peer mentoring, however did not utilize any type of social story supplement. Connor (2009), Scattone (2008) and Bledsoe et al. (2003) used social stories in isolation and in combination with video modeling but not integrating peer mentoring. For all of the studies that have been completed, all showed benefits of using each method in isolation, however, there is limited research to show the effects of how all these strategies can work together.

Technology in Special Education

Several studies have measured the effects of integrating technology in various aspects for students with special needs. A ten year-old boy, diagnosed with learning and behavioral disabilities, exhibiting frequent off-task and disruptive behavior during small group math instruction was taught to use an iPod Touch for video modeling and self-monitoring purposes. In doing this, increased his on-task behavior (Blood, Johnson,

Ridenour, Simmons & Crouch, 2011). This was done as an A-B-BC design. Blood et al. integrated both video modeling technology, self-monitoring techniques and peer mentoring. The student viewed a 3-minute video immediately preceding his math class, in which peers modeled appropriate math group behavior. Video modeling via the use of an iPod Touch resulted in a significant increase of on-task behavior and decreased disruptive behavior over several intervention phases.

In another intervention to aide students with behavioral skill acquisition, Xin, and Sutman (2011) used a Smart Board, or an interactive whiteboard consisting of a large touch-sensitive screen that uses a sensor for detecting input, to teach social stories to two nine year-old students with ASD. Two special education teachers developed the social stories based on Gray's (2000) social stories before projecting the images and replacement behavior on the Smart Board and allowing the students to circle correct behaviors after sliding through each story independently. The students were able to significantly reduce humming noises during class time and showed modest improvement in raising their hands (Xin & Sutman, 2011).

Hagiwara and Myles (1999) further assert that computer technology can enhance the effect of social stories in teaching social and behavioral skills to children with ASD. Sansoti et al. (2004) indicate that the format of traditional social skill training, including direct instruction of these skills, role play, and specific feedback, demands reciprocal interactions between the teacher and student. In this study, the researcher explored the effects of using technology to assist in interactive social stories via an Ipad. The students used the interactive social story to watch and identify when the target behaviors we

previously discussed were exhibited. We then compared consequences in the social story to actual consequences we had predicted and/or experienced ourselves as a result of the behavior. Students enhanced their knowledge base on appropriate social interaction based on decision-making opportunities made available by technological media.

Chapter 3

METHOD

The following section outlines the method and design used in this action research study. The process and implementation are documented for how the intervention was implemented and over what time period. In an effort to answer the research questions associated with the study, including determining the effects associated with implementing a comprehensive social intervention, the method outlines the tools and their specific purpose in gaining answers. Changes in student behaviors and their perceptions were documented so the effectiveness and all other subsequent effects of the intervention could be ascertained.

Participants

All three students attended a school located in a suburban school district in a community adjoining a major metropolitan area in the southwestern United States of America and their names have been changed to protect their privacy. The school is considered a Title One school based on the low socio-economic status of the areas surrounding the school as measured by over 90% of the population qualifying for free and reduced lunch.

Isaiah, an Anglo male diagnosed with ASD, was a 9-year-old fourth grader at the time of intervention and had an active IEP to help him in his goal of staying on-task and had qualified to receive resource, or pull-out, services in the academic areas of math, reading and expressive writing. Isaiah was chosen to participate in this intervention by recommendation of several of his third grade teachers and fourth grade teacher based on observations and the following selection criteria: (a) had been diagnosed with autism, (b)

demonstrated repetitive asocial, off-task behavior; including crying and disruptive yelling or inability to cope with typical disappointments, defiance to simple and complex tasks, self-injurious hitting and severe negative comments made about his personal life or well-being and (c) currently had an individual education program (IEP) containing goals in the area of social emotional development. Furthermore, the IEP team for this student recommended his participation in this study for the further success in social and emotional goals. In this study, he is referred to by his pseudonym Isaiah or as the "student with autism."

Two general education peers were also chosen to participate in this study. Jeremiah, an Anglo male who had been identified to have trouble following expectations in on-task classroom behavior and interaction with other classmates was 9-years-old at the time of intervention and in the same fourth grade classroom as Isaiah. Jeremiah was identified through the following criteria: (a) at-risk for maladaptive and off-task behaviors, including inability to sit and attend to task, participate in a lesson or cope with authority or limits usually ending in arguments among students or teachers and defiance to some academic and non-academic tasks, (b) not eligible for special services or never been referred for special services and (c) had not received services or intervention at the time of intervention (or prior) for the off-task behaviors. Jeremiah had never been referred for academic special services; however there were concerns with social behaviors. Jeremiah was recommended based on the need for tailored instruction in social and adaptive behavior. In this study, he is referred to by his pseudonym Jeremiah

or as the “at risk peer.” Both Jeremiah and Isaiah may also be referred to as the “target participants” or “target students.”

Another general education peer, Marco, was chosen to participate based on his demonstration of adaptive skills. He was chosen on the following criteria: (a) demonstrated consistent ability to follow given expectations according to teacher observations, (b) had positive social relationships with classmates and has shown the ability to work with others cooperatively according to teacher observations and (c) grades were consistently above 80% in all areas over two consecutive quarters and (d) he shared the same classroom with both aforementioned peers. Marco served as a more knowledgeable other (MKO) and participated in all aspects of the intervention, however, data relating to his perceptions of the study were only collected to help him observe and articulate how the intervention may have affected the other target students in his classroom with the adaption of skills. While his role is participatory, the research questions in this study only focus on the behavioral impact and change in perceptions for the target students. In this study, he is referred to by his pseudonym, Marcos, or as the “model peer.”

Vygotsky (1978) states a MKO refers to anyone who has better understanding or a higher ability level than the learner, with respect to a task, process or concept. Peer mentoring was defined by Carter, et al. (2005) as an intervention that involved one or more peers without disabilities providing academic or social support to students with disabilities. McEvoy et al. (1990) also described peer mentors improving their own behaviors, alluding to the idea that the peer mentors were not completely infallible in

their own behaviors and susceptible to improvements too. For the purposes of this study, a MKO has been defined through the above criteria.

The researcher's role in this study is participatory. The researcher devised and planned the lessons and facilitated the lessons for every session. It is also important to note that while the researcher was the special education resource teacher for Isaiah in the previous years, she was no longer his teacher of record nor did she teach him in any subjects in his fourth grade year. The only times the participants met with the researcher was during the intervention sessions. The researcher was familiar with all three participants from the previous years and all three boys had knowledge of the researcher from the previous year as well.

Intervention

The intervention consisted of presenting three distinctive components, peer mentoring, interactive social stories (ISS) and video modeling, in a systematic lesson plan format to help aide in the further development and understanding of socially adaptive behaviors in a general education setting. The intervention was conducted in the resource room immediately before the students had the opportunity to demonstrate the behaviors in their general education class. Following is a description of the components in the intervention as they were implemented using a multiple baseline design (Appendix A).

Lesson Plans. Each lesson plan for ISS and video modeling components included scaffolding practices, starting with the most general reasons why we should practice good choices and what those good choices may look like. Then, after students generated why

they should make good choices and, with teacher prompting and guided discussion, created a list of what it may look like, they then got to see what it looks like in a social story and compared their ideas on why they said we make good choice with what happened in the ISS. They also discussed what those good choices looked like and compared to their earlier list (see Appendix B for lesson plan). While the lessons followed a traditional script including an opportunity for them to have appropriate modeling (I do) and practice together (We do) and followed with a short self-reflection (You do) by using a sentence starter in their journals, the lesson session still included many questions, or cognitive coaching strategies meant to (a) Capitalize upon and enhance cognitive processes, (b) Allow the student to evaluate what is good or bad, appropriate or inappropriate, effective or ineffective, and (c) Mediate thinking and enable the thinker to become metacognitive (Costa & Garmston, 2012). Also, the students were engaged in decision-making, thought and perception as it related to their own situations in their general education classrooms (see Appendix B). Students were asked at the end of each session to choose a personal behavior or aspect of a behavior, they would like to improve on and they wrote the behavior in their journal along with the time and place they could demonstrate it. Later in the sessions, they were also asked why they chose that behavior or they made a prediction asking if they did that behavior, what would happen. Students were allowed to either share their behaviors they wanted to work on or not share with the others. At the beginning of each session we revisited these journal responses and the students evaluated the behavior they chose to improve while student peers offered positive praise on whether they were able to see the student demonstrate that behavior in

class. Each student was asked to “catch” any other student performing the behavior we were discussing and share with us when they saw them doing it.

Interactive Social Stories. According to Gray (2000) a social story is designed to teach children how to manage their own behavior during a given social situation by describing where the activity will take place, when it will occur, what will happen, who is participating and why the child should behave in a given manner. An interactive social story (ISS) is defined in this study as a video application representing classroom challenges from the point of view of a student-actor that illustrates the situation, place, participants, options and consequences for behaviors in the situation. The ISS was created by the researcher purposefully based on previous observations where the specific challenges may have elicited various inappropriate responses. A social story script was created by the researcher as a means of describing what consequences a certain choice in that situation may lead to for a student. Prior to the intervention, a production crew filmed the researcher acting out the sequences depicted in the script along with a group of student-actors. A videographer then edited the film and created the application, complete with scene transitions and graphics illustrating choices and positive reinforcements for correct responses. This application was then reviewed by the researcher and finally downloaded to an iPad for implementation with the students (see Appendix C for the complete script).

These video applications were presented to the students via an iPad during the designated sessions that were scheduled to showcase the application for illustration of a specific skill. The setting depicted students and teachers and the teacher-actress

(researcher) is shown teaching a lesson very similar to one the participants have had in the past. Expectations were given at the beginning of the lesson, just like they were given in their own classrooms however; the expectations in the ISS were interactive and required physical kinesthetic responding from the student actors to further help them and the audience to remember the specific expectations. As the lesson proceeds, the student actor is presented with an apparent problem based on the expectations given and certain opportunities for on-task choices and off-task choices that arise. Participants in the study had an opportunity to discuss and choose out of four options, one of them being the socially appropriate response. If the participants choose a less desired answer, the choice played out and the consequences were highlighted so the participants saw how making that choice transpired, thus making the connection between good choices that lead to positive reinforcements and the less-desirable choices that may not lead to positive reinforcements. One behavioral choice was specifically focused on and discussed during the designated ISS sessions until all four choices were chosen and discussion about all four choices had occurred.

Video Self-Modeling. Video-self modeling is a term used in this study to describe the video-taping of a classroom environment for the use of facilitating discussion on the appropriateness of the actions taking place in the video. The target students and their model peer were video-taped in their classrooms and the videos were used to demonstrate the skills we were discussing, attention to task, appropriate raising of hands and initiating academic questions and responding, respectively. A short ten minute segment was chosen and edited to be presented to the students and it was meant to show some or all of

the participants demonstrating the target behavior or pose opportunities for reflection on where the behavior could have been demonstrated and why. The participants discussed and identified the behaviors of the participants who were demonstrating the target skill with the guidance and prompting of the researcher, whether it was the students with autism, the at-risk peer or the model peer. Since the video modeling came directly after the ISS phase, students used knowledge and insight gained from the ISS lessons to help them dissect and apply knowledge on appropriate or non-appropriate choices that actually occurred in their general education classroom. Specific questioning on the part of the researcher helped them to hone in on the important aspects of their positive behaviors and the positive behaviors of others evident in the video and they spoke on the specific consequences that transpired as a result of those positive behaviors. The consequences identified in the earlier discussion of the behaviors and the consequences from the ISS behaviors were compared and contrasted with the actual occurrences and behaviors shown in the videotapes. Students discussed how what they discussed previously was relevant to their own behavior in the videos. If students did not demonstrate the target skill in the first video, they still had the opportunity to show the correct on-task behaviors in subsequent video-taping and coinciding consequences were again discussed as it related to the previous discussions.

Citizenship Program. It is important to note that this intervention was also conducted in a school that has been implementing a school-wide citizenship and behavior program, the *Make Your Day Program*. This program is centered on the idea that no child has the right to interfere with the safety, well-being or learning of others. When or if a

student chooses to interfere with these areas, they are asked to allocate a certain amount of points. Students understand that their actions result in fair, logical, and predictable consequences that are enforced in a manner that preserves their dignity (MYD Philosophy, 2013). The points they choose to earn throughout the day are then added up to determine whether they have reached a certain amount so that they can say they "made their day." The student does not receive any type of reward or incentive for making their day, they simply receive internal gratification. If they do not make the amount of points needed to make their day, they then had a "make your day slip" sent home that stated what behavior they had adjusted the most points in and the slip had to be signed by a parent and brought back to the teacher. For the fourth grade, students are mostly required to attain 40 points within the course of a period. Points are taken throughout the day, usually after the end of a lesson or subject. Anything below a 37 in two consecutive sessions is cause for the student to become aware they may not "make their day," that is, receive enough points to avoid getting a slip that must be signed by their parent.

Research Design

This study incorporated a multiple baseline design (MBD) across behaviors. It was not possible to withdraw treatment and return to the initial baseline of the behaviors students were exhibiting nor was it ethical to reverse treatment so MBD was the most desirable design in which to measure the effects of the intervention treatment on behaviors; sustained positive effects of the treatment were highly desirable as well.

The intervention focused on three behaviors for the participants, each behavior was introduced separately but integrated over time. The behaviors that were to be

improved: (1) attention to the lesson (2) appropriate demonstration of raising hand for needs in the classroom and (3) appropriate academic responses. The intervention was tailored for each behavior one at a time over six sessions, two sessions were devoted to dialogue and brainstorming reasons why this behavior could be useful, two sessions using the ISS to illustrate a real-life example of the behavior and comparing previously stated reasons on usefulness of the behavior brainstormed by the students to what was shown in the ISS, including making predictions on consequences of the behavior, and finally two sessions on watching the video-self modeling of themselves in their own classroom and relating their behavior to the behavior conversations held previously. With the videos, the students reflected on the consequences of demonstrating those behaviors in their class and drew upon their knowledge from reflection that occurred with the previous ISS and discussion sessions. There were a total of 18 sessions dedicated to the three focus behaviors. Student performance for each behavior was tallied for each target student and a percentage was given for each target student. While baselines were taken on all three behaviors, each new behavior skill was introduced consecutively starting with the first: attention to the lesson. Once growth in that area improved across all participants, the intervention then focused on raising hands. Once this behavior increased consistently across the target participants, the intervention then focused on academic responding. Introduction of each new skill was delayed if the previous behavior did not yield any growth from both target participants. Appendix A shows the structure of the intervention including when baseline percentages were taken with percentages on the left and observation sessions under each behavior.

Setting

Observations took place in two settings, the students' reading class and the students' math block. This was to measure their transfer of skills over a separate setting and to present the transfer of the skills throughout the day. Due to the researcher's own responsibilities as a teacher in the same school, many observations were not able to be done on the actual day of the intervention session but at least one observation session took place weekly. One maintenance setting observation took place after the duration of the intervention, that is, after all aspects of the intervention were completed. These considerations were put in place to observe if the skills were transferred and demonstrated without intervention.

Mixed Methods Approach

Data on the effects of the intervention were gathered using a mixed methods approach. The study integrated quantitative tools, including an observation protocol depicting frequency of target behaviors, as well as qualitative tools including mid and post intervention interviews, pre and post vignettes, student journals and a researcher journal to capture data on sessions and observations. An observation protocol outlined behaviors in three areas of (1) attention to the lesson, (2) appropriate demonstration of raising hand for needs in the classroom and (3) appropriate academic responses. The protocol was used to tally and calculate a percentage of time students demonstrated behavioral skills over the course of the intervention as they were transferred to the general education setting. All three students were interviewed at the mid-point and post-intervention to document self-reflection by the target students during the course of the

intervention. Vignettes were also used to gauge the transformation of behavioral choices students went through throughout the term of the study by offering the students a depiction of a typical situation in which they had to offer suggestions for behaviors. Student journals were also used to document student changes in reflections and behavioral goals at each intervention session. The researcher journal documented reflections of the process as well as any other data that was relevant to the study not captured by the above tools.

Instruments

Quantitative Instruments. The study used an observation protocol to determine how behaviors changed over the course of the study for the student with ASD and the at-risk general education peers.

This protocol captured observed behaviors for the two target students in attention to task, appropriate raising of hand and appropriate academic responding. All behaviors and subcategories were defined in the protocol (see Appendix D and E).

In an effort to ensure efficiency, practicality and to satisfy the requirements in attaining progression in the target students' ability to demonstrate all three behaviors over the course of the multiple baseline method, the observation protocol was designed to document behaviors simultaneously. Below is a description of the criteria needed for each behavior and the process for which the behavior was tallied.

1) Attending to task behavior was defined as the student looking or facing in the direction of the teacher, instructional assistant, and reference to lesson or written visuals related to the lesson in a sitting position with his buttocks touching the chair

and his head above the desk for at least five consecutive seconds. This was noted on the protocol during an interval segment of 30 seconds. If the student could demonstrate the behavior for five seconds at any time during the 30-second interval, the observer wrote a tally in that interval timeframe. A total of 20 intervals were taken for each 10-minute observational period. To ascertain the percentage of time on task, the total amount of times the student was able to show this behavior over the course of the observational session was divided by 20, the total amount of opportunity intervals.

2) Appropriate hand-raising was overtly taught as the appropriate response to any need that presented itself during any lesson. Students who physically raised their hand, held it still in the air and waited quietly for a response from the teacher were marked as demonstrating this behavior, no matter what the need was, academic or personal. This was noted on the protocol using a frequency count. Every 30 seconds the observer marked whether this behavior was shown. This behavior could only be counted in response to the opportunities that presented themselves during the observational session. Certain observational sessions may not have provided for hand-raising opportunities if the student was proficient in doing the assessment independently or if there were no personal needs during that session. This protocol was merely to gauge whether the student was able to increase their use of this skill during the intervention.
3) Academic responding, much like raising hand was highly reliant on opportunities that presented themselves for these students to show this behavior. All lessons, however,

did allow for some type of academic responding. Academic responding was further divided into two sub-categories.

a) Verbal responding included any responses that were verbal and social in nature. This may include, but is not limited to, talking about the content, asking a question, sharing with a partner, and/or commenting about the content with a teacher or aide. If the student was able to show these behaviors, no matter what format during a 30-second interval, the behavior was marked in the form of a tally for that interval as V for verbal distinction.

b) Written response was defined as any writing behavior related to the content being taught lasting five consecutive seconds. This was denoted on the protocol as a W.

All observational sessions were video-taped. The researcher conferred with the psychologist and special education paraprofessional to test for inter-rater reliability in counting the behaviors. This occurred for 70% of the observations for each target student. One party video-taped the observation using the iPad and the other verified the appropriate tallies after watching the observation. If there were differences in tallies taken, they were then discussed and agreed upon given the strict interpretation of the definitions and criteria needed to count the behavior. After inter-rater reliability of 90% was satisfied, percentages for each behavior were calculated by dividing the amount of demonstrated behavioral interval occurrences over the total number of intervals in that observational session. These percentages were used to determine whether the intervention had impact on change in these behaviors over the course of the study. The protocol included a designated space for notes that could be recorded to explain opportunities for

the behaviors, background on the activity taking place in the lesson or insight into what previously occurred prior to the observational session that may have impacted the student behavior, such as the student was in the bathroom during the time the teacher gave expectations and the student did or did not ask for clarification upon arriving back in the classroom. This was used primarily to give the researcher specific background or insight into the opportunities given for the behaviors and possibly the motivations that drove the students to behave in such manners.

Qualitative Instruments. Qualitative instruments documented the effects of the intervention and how behaviors changed over the course of this study. These instruments included student interviews, responses to vignettes, a researcher journal and student journals.

Student Interviews. Target student interviews took place during week six (mid-point of the intervention) and in week ten, at the end of the intervention. Interview protocols were devised using questions that were meant to engage the participant to reflectively cite and describe a specific incidence when they were able to demonstrate the positive behaviors discussed in the intervention sessions and relate the behavior to how it made them feel and how those around them reacted to the behaviors (See Appendix F). Each interview was recorded and transcribed. Along with the student interviews given to the student with autism and the at-risk peer, the model peer was also interviewed at the end of the intervention to capture his thoughts on items that were happening in the class and gather his perceptions on the change in the other students' behavior. Because the model peer went through all the aspects of the intervention and was in the same class as

the two target students, he had a unique perspective on the changes that could possibly be taking place in the classroom and outside of the observation sessions. The model peer interview prompted insight on occasions or opportunities where there was a transfer of skills outside of the times that the researcher was formally observing (see Appendix G).

Vignettes. Vignettes are hypothetical renditions of situations that were meant to mimic everyday situations that could induce maladaptive behaviors. The vignettes presented to the target students summarized a situation for a hypothetical character and offered the students an opportunity to give their advice as to what the student should do. The advice given to the hypothetical student by the target students offered insight into the motivations and personal choices that participant could take when given the same opportunities. It was also intentionally meant to show the changes in responses for the student with autism with regard to his ability to empathize and share advice with others on behavior. The responses to these pre and post vignettes were used to compare the target students' advice given before and after the intervention. Three vignettes were presented to each target student before the intervention and the same vignettes were given after the intervention. Each vignette was read to each target student in conversational style, that is, in a private, informal classroom setting, outside of school hours. Follow up questions were posed to the students to clarify their understanding as needed. Student responses were recorded and transcribed (see Appendix H).

Researcher Journal. The researcher kept a journal throughout the term of the intervention. This journal summarized teacher-student dialogue during the sessions and any changes in student behavior. Entries were written in on the days of the sessions to

record observations and changes among the students in responses or participation. Entries also indicated changes to schedules, such as short weeks or holidays in the school schedule that might affect observation sessions. Journal entries also documented when or if the researcher came in contact with the students or their teacher outside of the intervention and specific reference was made about their behaviors or the intervention.

Student Journals. Student journals were used to allow the students a venue to record what behavior they were hoping to improve upon until the next session. Students were asked at the end of each session to choose a personal behavior or aspect of a behavior; they would like to improve on. They recorded this behavior in their journal along with the time and place they could demonstrate it. Later in the sessions, they were asked why they chose that behavior and made a prediction asking if they did that behavior, what would happen. Students were given the opportunity to either share the behaviors they wanted to work on or not share with the others. At the beginning of each session they revisited these journal responses and evaluated the behavior they chose to improve. Prompts for these journal entries included "taking into consideration what we have discussed, please choose a behavior you would like to show in your classroom between now and the next time we meet" or "write down what behavior you would like to show." In the beginning of the intervention a sentence starter was offered to help the students frame their reflections. Toward the end of the intervention, journal entries included predictions on what would happen if the students chose to show this behavior. Each returning session, the students wrote in a journal to reflect on whether they were able to demonstrate the previously chosen behavior to improve on, and if so, the

corresponding consequence that ensued as a result of that behavior. If there was not time to write a full reflection on what the consequences was, the students verbally stated it. The students also commented on perceived consequences on the behaviors others shared as wanting to improve. The students dated each entry (see appendix I)

Data Analysis

A mixed methods approach seeks broader, deeper and more comprehensive social understandings by using methods that tap into different facets or dimensions of the same complex phenomenon (Greene, 2007). Results from the five instruments (observations, interviews, vignettes, researcher journal and student journal) served to elaborate, enhance, deepen and broaden the overall interpretations and inferences from the study. They were used to collect and measure the effects of the intervention and were also systematically used to analyze data sets by convergence. Although distinct, they were implemented intentionally close enough in time to each other, so that results from each method could be compared and assessed for the degree of convergence across themes (Greene, 2007).

Data were analyzed using Strauss and Corbin's (1990) grounded theory and the steps for data analysis outlined by Greene (2007). These steps enabled the researcher to make warranted assertions about the effectiveness of the study using the research questions. Once the data was collected it was placed into a file that holds all data sources collected for the study and charted using an outline of possible preliminary emerging constructs. Each chart carried specific quotes or frequencies inherent to that data source and its emerging construct. Correlations and ideas were tagged to depict the type of

construct or the ideas surrounding that construct, such as friendships or support. Insight gained from the researcher journal also guided the correlations throughout the process, as evidence from it was also recorded, highlighted and tagged for phrases or words that share common context or relate to specific areas of the intervention. Words, phrases and interpretations taken from these data sources were documented on a master chart that outlined constructs and divided evidence by the data source quotes. To maintain reliability, other professionals distinguished in the field of special education were also included in this process to gain perspective on legitimacy of codes and coinciding themes; confirming or denying the emergence of codes based on the evidence from each data source. These codes were eventually condensed, or grouped, and regrouped with arching names to describe the data (Strauss & Corbin, 1990). Certain codes remained clustered or became parts of other broader ideas once all data was collected. Several chunks of data were used repeatedly as they lent themselves to several sub-categories until they started to represent and justify reoccurring themes in the data. While convergence and corroboration were anticipated among data sets the researcher also looked for instances of possible divergence and dissonance as the data related to the research questions and as a result of the intervention (Greene, 2007).

Greene (2007) outlines several steps for analyzing data sets including (1) Reducing and organizing the raw data into manageable form, (2) Assessing patterns of interrelationship, connections or trends and (3) Supporting and validating conclusions and inferences. This study used the following procedures:

1. Data Cleaning-data sets were reviewed for valid responses and soundness. Data not presenting defensible aspects related to the intervention or in direct relation to the initial research questions were deleted or put aside for further review, if necessary. This included non-relevant comments or items in student interviews or references to other occurrences not related to the study.
2. Data Reduction-raw data was analyzed and reduced to descriptive forms, such as charting the occurrence of incidences that were observed by the researcher from the journal. This meant color-coding and tagging specific instances where reoccurring or connecting ideas were emerging and related to a specific aspect that was coded (Strauss & Corbin, 1990). For example, narrating specific data that was showing correlations between two distinctive data sources were reduced to descriptive form or illustrated using actual word for word descriptions so that the next time the researcher brought new data, it was already summarized and easily referenced. Frequencies in occurrences were counted and added each time a specific account related to that code surfaced. If there were specific factors playing a role in the observational data, this is where the researcher described the factors and counted the occurrences. All aspects of the data were placed in a code, such as friendships or emergence of self-awareness.
3. Data Transformation-quantitative data was standardized and qualitative data were formed into critical narratives or chronological displays. For example, this occurred when percentages for the quantitative protocol were calculated and plotted over time so progression of the behaviors was apparent. In qualitative

form, narratives were used to describe succinctly the progression of behaviors as they related to the quantitative results using the researcher journal and notes from the protocols. They were condensed for succinct display and consolidation in a chart so that their correlations were clearly presented over the course of the dates the instruments were used to get the data. This also meant placing data related to two different constructs together and forming one merged data set. Qualitative data from interviews, journals and vignettes were quantified in terms of occurrences, or number of responses, but mostly depth of responses within a given construct was cited; citing a specific position on a term/phrase or idea. The quantitative observations offered frequencies of behaviors and possible insight via notes on the environment surrounding the behaviors.

4. Data Correlation and Comparison-patterns of relationship in the data set were marked according to clusters of variables, themes or stories, progression of responses, that appear to go together, as well as what importantly differentiated one data cluster from another such as time. At this point, correlations were crossed within tools and data sets. Correlations among data sets were made by looking and evaluating the relevancy of other data sets as they relate to one specifically, such as data sets in encouragement and support among students and sets in emerging friendships. Qualitatively, related findings were constantly compared with other forms of data. Evidence-based conclusions were made on the comparative and clustering of data.

Analysis by Tool

Each tool is outlined below to show the specific processes in its analysis as it relates to the firsts four steps including data cleaning, reduction, transformation and the data correlation and comparison step.

Observational Protocol. Percentages of interval target behaviors taken using the observation protocol were totaled and graphed over the amount of sessions for each student and trends were correlated with other mixed methods; after distinct trends were noted within the respective observation protocol only. Data was first sorted and organized by taking the amount of times the target students showed the target skills in the observation and writing as a formula over the amount of opportunities for the recorded observations only (data cleaning and reduction). Once data percentages were taken for each observation session, average changes in behaviors were computed for each skill over the course of the entire study. The differences in percentages were calculated by subtracting the baseline from the percentages of times the skill was demonstrated for each observational session and then adding all the differences in percentages and dividing by the total number of non-baseline sessions. Narrated codes were given to certain observational intervals/occurrences if there showed to be reoccurring situations that may be affecting the behaviors and they were significant to note. If participants happened to be absent on the date of an observation, these observations were cleaned or reduced for codes or themes related to that participant.

Student Interviews. Transcribed versions of the interviews were repeatedly read so that valid and quality responses were separated from non-valid responses (data cleaning). Specific phrases or reoccurring progression of terms or feelings were

summarized across each participant's interview and then looked at cumulatively across both participant responses (data reduction). Data was then standardized or generalized both across each participant's responses and cumulatively across all responses and placed into a chart citing emerging codes in either instance (data transformation). Different colors denoted emerging codes and eventually colors were designated, or clustered, for concrete, resounding themes at the end of the study across interview data only. Upon charting codes based in interview data, data was then correlated to other data from other tools, across methods and cross-checked for similar codes or constructs (data transformation and correlation). Resounding clusters of variables that appear to go together across tools were charted for further analysis. In this study, this could mean a quote from an interview could be clustered with a quote from an intervention session if they both related to a specific idea or construct, such as friendship or peer support. These quotes were placed in a matrix chart that outlined the construct the data was referring to, the tool that it was collected and the time in the intervention the data was received.

Vignettes. Vignettes were transcribed, read and reread so that relevant and valid responses could be used for analysis (data cleaning). If a student included comments not relevant to the situations presented, those response were put aside for further review if necessary at a later time. The rest of the raw data was then summarized into frequencies of terms, sentiments, or factors as they related or progressed over time (data reduction). Each participant response was placed in a chart designating the phase it was collected in using actual quotes cited and a descriptive summary of

interpretation for developing constructs or codes (data transformation). Once all data for each participant was charted and compared within responses and across responses, including quantifying certain qualitative terms quoted in the matrix chart; it was then filed according to overarching constructs emerging among other data sources (data transformation and correlation). Once codes were collapsed and clustered, a new chart was organized to show the overarching themes coming through the data across tools.

Researcher Journal. The researcher journal captured specific observations or anecdotal stories shared by the home room teacher or by the students that related to the intervention. It illustrated the progression of certain conversations or revelations of the students during the sessions and/or outside of the intervention. The content of the journal was reviewed at the end of the intervention to make sure that all data included was relevant to the questions posed at the beginning of the study and were in direct relation to the goals of the study (data cleaning). This was done by also tagging and highlighting certain reference to codes that were preliminary and emerging. The data highlighted and tagged in the journal was then placed on a chart to illustrate the frequencies of occurrence for specific references or anecdotal stories (data reduction). At this point, the data was then charted and correlated to other pieces of evidence linked from other data sources to illustrate possible codes that may be emerging (data transformation and correlation).

Student Journals. The student journals were a venue to allow the student to progress in their perceptions of their own behaviors. The responses to the prompts

that were given each session were used to gather data on specific emergent codes and observe the progression of their reflection and means of improving over the course of the intervention. Data not specifically related to the research questions posed in this study were not used: this may have included pictures or doodles done by the students (data cleaning). All data from the journal was placed in a matrix chart and reduced again based on the frequencies of the references to certain ideas, possible behaviors or behavioral consequences (data reduction). The data from the journals was then divided upon specific criteria and correlated among other emerging codes with other data sources (data transformation and correlation).

The last step included using the collapsed charts that included condensed overarching codes and the corresponding data to form themes across the data. These themes would then ultimately be used to make warranted assertions concerning the effects of the study. Using concrete evidence based quotes, frequencies from observations, frequencies in surveys or responses in vignettes as well as the researcher and student journals to validate claims, conclusions may be tentatively warranted.

5. Analyses for Inquiry and Conclusions- analyses were finally conducted in support of study conclusions of inferences. Quantitatively and qualitatively, data were analyzed and inductive developments of evidenced-based themes prompted conclusions, or warranted assertions to be upheld by the data. Charts for each tool mentioned above and the preliminary construct codes within that tool were cross-correlated across other tools for purposes of triangulation. Evidence based references were attached to the chart as they apply to the tool they are referring to.

For example, a chart based on observations and the preliminary data surrounding the codes emerging from the observations only were then consolidated to fit into a greater theme chart constructed across all tools. Each tool offered evidence based instances to add to the warranted assertions chart. All assertions made were cross-checked by another observer for reliability by sharing emergent codes and gathering perspective outside of the researcher's own biases. The researcher held member checks with several other professionals in the field of education in an effort to reliably come to justified conclusions. The researcher met with others weekly to discuss changes and progression in data sets.

Erickson's Method, that is, repeatedly reading of the data as a whole, was also used to arrive and inductively warrant credible assertions and themes (Greene, 2007). Assertions were defined as statements that the researcher believed to be true based on an understanding of the data used from the tools along with member checks with other professionals to confirm accurate use of evidence. Assertions were ascertained by assembling the confirming or disconfirming evidence, such as specific student phrases or sentiments as captured in the interviews or actual intervention sessions, and casting out unwarranted assertions or emerging codes that were not justifiable over the entire data set. This process ensured assertions were credible and coherent based on very specific evidence shown through student actions as supported through the use of data gained by each tool.

Reliability and Validity

To assure the trustworthiness of the tools, they were pilot tested for useful feedback from a group of teachers who were not involved with the study. Considerations for validity were adapted for this study. Mills (2007) outlines Guba's Criteria for Validity of Qualitative Research and several criteria to ensure validity including peer debriefings. These took place with the psychologist and special education paraprofessional on campus for at least for 25% of the observations. In addition, member checks were conducted with all students to document and confirm their answers and all quotes were recorded. Mills (2007) also outlines several other areas to take into consideration including making modifications to the process when it is apparently in the best interest of the participants, which was taken into consideration throughout the process, and cited in the researcher journal. Conversations with others in peer review included sharing data and gathering critical feedback to enhance reflection. Weekly meetings with others who oversaw the research implementation also occurred. When interviewing the students, the researcher waited to be told sentiments (Wolcott, 2007). "That is all" or "that is it" by the students to guarantee they were finished talking. The nature of the sessions prompted incidences of questioning and cognitive coaching so many times, the researcher was filtering questions and awaiting responses. Keeping a researcher journal also ensured validity (Wolcott, 2007). After each session with the students a research journal entry was made on observations from the session for each target student.

Chapter 4

RESULTS AND DATA ANALYSIS

This chapter presents the findings. Each section is outlined by the research question, followed by a summary of the findings gathered by the corresponding tools.

Research Question One

RQ1: What is the impact of a comprehensive approach including peer mentoring, interactive social stories and video modeling on student attention to task, appropriate hand-raising, and initiating academic responses in a general education classroom for one student with autism and one general education at-risk peer?

Changes in Behavior

Shifts in behavioral choices for both Jeremiah and Isaiah were reflected in the data received from several instruments. Changes in growth for Isaiah, the student with autism, and Jeremiah, the at risk peer, were recorded as percentages of time the targeted behavioral skills stayed consistently above the baseline through the course of the intervention. Changes were also noted through observations from the researcher journal, sentiments reflected in the student journals, interview with the general education peer, observations within the general education classroom and comments from the classroom teacher and students.

Behavioral Changes Documented in the Observation Protocol. The protocol was designed to facilitate a multiple baseline method design. For this reason, all three behaviors including (1) attention to the lesson (2) appropriate demonstration of raising hand for needs in the classroom and (3) appropriate academic responses were monitored

throughout the intervention to track percentage of time on behavior. Both Isaiah and Jeremiah made significant improvements in their ability to stay attending to task over the course of the observations. Both were able to stay on task for 100% of the time for several observation sessions throughout the term of the intervention.

Isaiah

Figure 1 outlines Isaiah's demonstration of the learned skills over the intervention.

Attention to Task. Isaiah started the intervention with zero percentage of time on task. This included him looking at shreds of paper inside his desk cubby and making sounds to himself looking downward. He demonstrated a slow and steady growth of time on task to 29% in the third session, growing to time on task percentages in the 90s toward the end of the intervention. He was able to maintain the last several sessions at 100%.

Hand Raising. Isaiah was able to demonstrate growth in hand raising overall. He was only demonstrating 8% and 0% time during the baseline observation sessions, but slowly grew to a high of 35% of the time for raising hand during the sixth observational period. Before the intervention, Isaiah was getting up to get drinks of water without raising his hand as noted in the observational protocol. However, in sessions six and nine he was able to raise his hand to get a pencil and for aspects of academic responding. During session seven and eight, it appears that Isaiah did not demonstrate the skill of raising his hand at all; however, he was attending to task at higher percentages and engaging in academic responding throughout the lesson. There was no need for him to raise his hand because he was engaged in the direct instruction and was responding to the

instruction through written and verbal responding so percentages of zero in hand raising does not represent the student not knowing how to use the skill, but rather a session in which the skill was not needed. Table 1 describes the nature of lessons for the observation session.

Academic Responding. For academic responding, Isaiah was demonstrating 0-17% of observed time showing this behavior during baseline. Midway through the intervention there was a great spike to 80% of the time observed for this behavior. Although this behavior declined to 0% on the second to last session, he ended the session with 100% time on task and academically responding through both written and verbal responding, demonstrating a raising of hands on three occasions and correctly answering a prompted question posed by the teacher.

In an effort to give further insight into the verbal and written responses, the researcher documented what types of academic responding Isaiah showed throughout the course of the observation sessions. In session four and five, 100% of the time responding to task was in written form. In the fifth session, the teacher was prompting the students to work independently however, without talking. In session eight, however, Isaiah was a group leader for a class activity and was responsible for conversing with his team and then sharing out on the team's behalf. He responded for a total of 71% of the time and 100% of that responding was verbal. In session eleven, Isaiah showed a steady demonstration of both written and verbal responding. He was academically responding for the entire session and of that session, he was contributed an academic response by raising his hand and answering two questions along with chorally reciting a text out loud

with the rest of his class. He was also following along with the teacher on a graphic organizer. He showed 91% written responding and 23% verbal responding. Most response types were highly dependent on the nature of the lesson or activity and the social expectations set forth by the teacher.

Jeremiah

Figure 2 shows the progression of skill development for Jeremiah. Jeremiah also showed growth in his ability to demonstrate these behaviors in his classroom.

Attention to Task. Jeremiah started at a baseline of 25% showing attention to task. During the initial baseline observations he was conversing with another student and yelling out while the teacher was teaching. He was redirected to get started on his work three times in the ten minutes of the observation session. By the end of the intervention, he slowly grew in his ability to show attention to task to about 80% midway through the intervention and ultimately showing 100% time on task toward the end of the intervention.

Hand Raising. In raising hand behavior, during baseline Jeremiah was not able to show this behavior (0%). He left his desk water twice and went to the restroom without raising his hand for permission, prompting redirection from the teacher. Although it seems Jeremiah showed little growth in this area overall, with only 25% maximum growth over the course of the intervention, during those times he was demonstrating raising hand behaviors it was to ask to drink water and to respond to questions posed by the teacher. Getting up without permission did not happen at all during the last six sessions, and although he was not raising his hand he was demonstrating higher attention

to task and academic responding in the lesson. So it would appear there was no apparent need to get up during these sessions such as for water or restroom, as in the beginning sessions. He did raise his hand in later sessions to respond to teacher prompts, but was not called on and chose to not raise his hand again after, possibly accounting for the low coinciding percentages. Table 1 outlines the nature of lessons for the observational sessions.

Academic Responding. In academic responding, Jeremiah showed substantial growth over the course of the intervention. He started with a baseline of 0%. During baseline he was conversing with another student during instruction. His conversation appeared to be pertaining to stickers he had on his desk. He was loudly telling the student to not take them. By the end of the intervention, Jeremiah had grown to a high of 90% demonstrating this behavior skill for one of the observational sessions, but by the end of the intervention he had stable percentages demonstrating academic responding spanning between the 50s and 80s.

Summary of Behavior Changes in Observation Protocol

The hand raising skill and academic responding skill percentages were limited to the amount of opportunities presented for these skills, sometimes depending upon the teacher or lesson (Table 1). For the hand raising skill, the target students could raise their hand appropriately for needs, such as the bathroom and water as well as academic responding and still be within the criteria needed to count this as an occurrence. Both target students showed growth in their ability to do this over the course of the intervention.

While both students showed growth overall in all categories, attention to task was the most noticeable area of improvement. On average, the increased growth for attention to task was 83% for Isaiah over the course of the entire intervention and the increase average growth for Jeremiah was 40% over the course of the intervention. In academic written and verbal responding, the average increase in demonstration of skill for Isaiah was 38% and 56% for Jeremiah over the course of the intervention. In academic responding, there were also significant spikes in certain observation sessions for each target student, such as session six and eleven where Isaiah was demonstrating this skill with 100% responding, either in written or verbal form, for the entire observed session. Jeremiah also had 90% responding in session five.

Behavioral Changes Documented in Researcher Journal. The researcher journal documented changes in behaviors cited by informal observations and conversations with the teacher and observations taken from the intervention sessions. In the beginning, the researcher noted that the students were inhibited about what aspects they wanted to improve on in their own journals, however, by the second week of the intervention, they were sharing and "catching" each other as they were performing the behaviors in their classrooms. For every session, students were reflecting in their journals on the aspect or behavior they wanted to improve upon; they were asked to observe and "catch" another student to see if they performed that behavior in their classroom the way it was discussed in the lesson; if they did, they were to share it out and were encouraged to give positive reinforcement, such as high fives. Several weeks into the intervention (week 4), the students were eager to share at the beginning of the sessions the positive skills they had

caught the others demonstrating throughout the time between the last intervention session. In week two of the intervention Isaiah stated he "did not see anyone doing anything." But by the end of week three Isaiah said he caught Marco, the general education peer, "sitting in correct listening position." Marco, the general education peer, could not find anything to comment on for Isaiah in the first or second week, but did catch Jeremiah "sitting with his bottom on the chair." He also caught himself "sitting in good listening position." Toward the end of week seven, it was apparent Marco was reporting more on the times when Isaiah would accomplish certain behaviors and he shared, "Isaiah was almost doing all the right things in raising his hand but he was standing up and waving his hand during math but the teacher called on him and she said that the answer was almost right and that Isaiah tried hard. That was good Isaiah." In week nine Marco also commented "Isaiah raised his hand without waving and the teacher called on him in social studies." By mid-intervention, all student participants were able to not only bring in a positive behavior they caught each other doing, but they were able to specify what lesson it happened in.

Both Jeremiah and Isaiah were able to use the vocabulary that was specifically taught, such as "feet flat on the floor" and Jeremiah specifically stated he caught himself with "eyes on the speaker." The students' teacher also sent a positive note home twice, in week six and week ten for Isaiah noting his positive changes in behaviors, and week nine for Jeremiah. This was aligned with the conversations during the sessions regarding the consequences that may come from making good choices. Both target students showed a desire to change the behaviors they were either not getting caught on or behaviors they

did not see themselves portraying in the videos. When Marco stated that Isaiah was "waving his hand" while raising it, Isaiah pledged later in his journal to raise his hand "without waving it" and "stay in his seat." The following session, he was honest in his reflection on whether he performed the skill by writing he "was not able to raise his hand in resource correctly but I took responsibility." This was an important observation for Isaiah because he had not spoken of taking responsibility before or had he commented on what happened negatively for a behavior. In addition, Isaiah also stated that he wanted to get better at "trying harder on his work" in session six of week six and in session eight of week six, he commented, "I was working on trying harder on my work and the teacher gave me a good note." He was able to make the connection between the consequences and his behavior, which he had been trying to improve. Also, in week eight, Isaiah was absent from one of the sessions but reported to the researcher outside of school hours that he still "made his day" and that he would put it in his journal the next day.

Jeremiah chose to pledge to change behaviors based on what he saw himself do in the video observations. For example, in week eight Jeremiah saw a video of himself standing the whole time near his desk and made the comment about how he was standing but his eyes were on the teacher so in his journal he wrote he would "try to stay with [his] bottom in the chair." The next day he approached the researcher in the hall and said he was able to stay in his chair. The next intervention session, after the boys reported on when they "caught" each other, he commented that he felt like he was doing better and could "make his day" more this year, not like last year when he "would not make [his] day almost every day." Marco then shared a story about his mother going to school for

math and “when she met a friend at school they helped each other learn and now she has an easier time learning math.” When asked to share how that was like us, Marco said “well now that we are helping each other Jeremiah is doing better at making his day.” The general education peer was illustrating how this process was helping the target students excel.

Both target students recognized their increased ability to demonstrate the skills they were working on during the intervention. This was also evident in their teacher’s comments to the researcher. In week ten the classroom teacher commented to the researcher “the last couple weeks were exceptionally well for Isaiah. Overall he has been turning in his work and paying attention” and this was why she was sending a good note home. Jeremiah and Marco also used this same occurrence as an opportunity to “catch” Isaiah at the next session citing how Isaiah showed a behavior and the teacher sent a good note home. Isaiah commented back that he was going to make “good choices forever.” In week nine and ten, the students began to cite not only “making their day” but other consequences that resulted from their good choices. Isaiah commented, his “team was proud” of him after discussing how he was a team captain in reading class. In week eight, the boys were citing other possible consequences that could happen in their journals and they shared getting good notes home, getting better grades, getting a reward or free time. After this, Isaiah pledged to “get answers correct and get better grades.”

Behavior Changes Documented in Student Journals. By the end of the intervention in week nine, the boys were writing specific areas noticed in the video observations to improve upon in their journals. Isaiah mentioned specific areas in his

journal by writing, “I will try to raise my hand and when I raise my hand the teacher can call on me.” Jeremiah was also vocal the entire intervention in writing how he had been “making his day” in his journal as a consequence of his good choices, specifically naming the behaviors he thought were attributing to it in his journal. One of the areas Jeremiah wanted to improve upon was in his ability to sit and attend to task, so in his week nine journal entry, he cited “I will try to sit down and because of doing this, I will make my day.” Throughout his journal, he was focused on staying in his seat. Once he saw the video of himself however, he changed his area to improve on as being able to raise his hand more, and consequently, his percentage of raising his hand improved midway through the intervention from 0% to 25% for two consecutive observations. This shows the transferring of skills as the students reflected in the journals.

Overall, both boys showed a change in the way they reflected on the behaviors they were pledging to change in their journals. While both boys used the videos to help them change behaviors Isaiah made his journal pledges based on what behaviors the students caught him doing in class and shared out or on the videos. Jeremiah was more focused on the videos of himself and made explicit changes in his own behaviors observed. Both target students, in weeks eight through ten, wrote specifically what would also happen if they chose to do these behaviors. Isaiah stated he would get better grades and Jeremiah wrote he may get a good note home. It was also important to note that both boys started to cite other consequences apart from making their day by the end of the interventions.

Behavioral Changes Documented in General Education Student Interview. The general education student, Marco, participated in the same aspects of the intervention and had the opportunity to follow the boys into their general education classroom and possibly get insights not captured in the observation protocol during the observation sessions. Marco commented on the changes he saw occurring in the classroom. When asked how he thought the intervention was affecting Isaiah's and Jeremiah's behaviors he replied with "I think it helped them because they became more smarter. We told you what we do in class and you taught us how to sit and what an active listener looks like and the proper way to raise your hand." When asked what kinds of things he saw happening in the classroom he replied, "I saw Isaiah raising his hand and not just playing in his desk like before and I saw Jeremiah doing his work and he raised his hand and getting the answers correct." After his reply to that question, the researcher asked what helped them the most and his answer was, "I think what helped the most was how to be an active listener because they do their work more and not fool around or talk to their partner." At the end of the interview when prompted if there was anything else he wanted to share he said, "Isaiah will want to read my book and he will grab in my desk and grab without permission and I tell him I will let him read my book but he has to ask me. Now he asks me. Sometimes I will still catch them. Every time I look at them they are usually doing something good, sometimes Isaiah is doing other things but mostly doing good."

Summary of Overall Behavior Changes

Isaiah and Jeremy showed growth in their ability to change their behaviors over the course of the intervention as cited in the observation protocol, observations in the

researcher and student journals and in the general education student interview. All tools provided data on the boys' enhanced attention to task. The boys' made pledges in their journal and the researcher made comments on the teacher's good notes home on paying attention and the general education peer also noticed an increase in attention among other areas.

Engagement in Intervention

Another crucial aspect of impact for this intervention was the engagement and enjoyment the students cited in the sessions. Much of the engagement and enjoyment was referenced as being due in part to specific aspects of the intervention itself, but also the coinciding friendships that were a result of the boys not only spending so much time together but the encouragement they gave one another, and the behavioral consequences they started to notice as a result of their participation in the intervention. The researcher journal and student interviews provided data to confirm these finding.

Engagement Documented in Research Journal. There were nine instances where the researcher noted aspects of suspense and excited dialogue from the students regarding an aspect of the intervention. The researcher observed heightened aspects of enjoyment whenever the students were able to watch themselves on the video. At first, the excitement was noted regarding just the use of the iPad and the interactive social stories (ISS). The boys were participating in the mock lesson shown in the ISS. The scene in the ISS depicted a lesson on antonyms and there were kinesthetic motions the teacher-actor was using to demonstrate the behavioral expectations. As the boys watched this, they too were participating with the teacher and student-actors in the movements the teacher was

prompting the class to do. As the intervention progressed, the boys showed less enthusiasm for the ISS and began to look forward to the sessions in which they analyzed their own behaviors in the classrooms via the videotaped observations. During several sessions where the video modeling videos were not being shown and the students were scheduled to engage in discussion for a new skill or apply knowledge to the ISS (weeks five, eight and nine), “they asked to see the videos of themselves.” Those sessions were characterized by statements written by the researcher, such as “they were excited to see the videos of themselves” and “they have been asking to watch themselves.”

As an engagement strategy when the videos were first presented, the researcher asked that they make a special clicking sound with their tongues when they could identify a person doing a learned behavior. When they were able to identify one, they would do this out loud. The boys continued to use this strategy in subsequent sessions on their own when they were watching the videos, even without being prompted to do it. When this would happen the researcher would call on a student and they would refer to the behavior they noticed. Then the researcher would ask the other two boys if they agreed or disagreed. Their enjoyment in the intervention was also evidenced by the students’ intentional seeking of the researcher in the hallway, or outside of regular instructional hours, on several occasions to let her know they were “making their day” or demonstrating one of the specific behaviors. This was noted twice in the journal.

The students began to make plans during Halloween to trick-or-treat together in week eight indicating an emergence of friendship between the three boys, another area of increased engagement over the course of the intervention. Toward the end of the sessions,

all three students were finding positive behaviors for each of the other two students, whereas in the beginning of the intervention only one or two students were recognized, or they would only find themselves performing the behaviors. Isaiah, in particular, began sharing more openly as to the behaviors he wanted to improve and the boys started issuing high fives (raising their hands high and clapping against another's raised hand) without the researcher prompting in the last two sessions. For example, in week five the researcher prompted them to "high five" each other for the positive choices they were catching each other perform in their classrooms, but by week nine and ten, the researcher noted that the boys were "high fiving" each other naturally and without prompting.

Engagement Documented in Student Interviews. Isaiah cited the use of the video self-modeling in both his initial interview and his post interview as the reason that he was getting better at making good choices. Other than his references to "making his day" or earning his points, little reference to the intervention was made in the initial interview. In the post interview, he cited many more meaningful aspects of the intervention that were coded as favoring the intervention or receiving enjoyment out of it. He stated he wanted to receive recess, prizes, good day notes, better grades and he wanted others to be proud of him. Upon asking him about how others felt, he stated that he felt others were proud of him and "they wanted him on their team or something." He also commented that he felt glad the other boys came (to the sessions) because they were his two best friends, Jeremiah was his first best friend and Marco was his second best friend. In addition, Marco also referred to the friendships that he made when he said, "Me and Jeremiah hang out more when we play football but in class I like to talk to Isaiah." The boys also

referred to liking the videos of themselves because it helped them. Isaiah said it helped him to “be good” and “fix things for the teacher.” Marco also commented in his interview what he liked about the intervention by saying, “I like watching the videos and you were teaching us and we could decorate our journals. I liked watching the videos of ourselves.” Jeremiah had similar sentiments regarding his enjoyment in the intervention. He stated he liked seeing himself on the videos knowing what “we are doing so we can fix it.” He also referred to his ability to earn more rewards with his parents because of the behaviors he was fixing, such as sitting down and raising his hand. He also reiterated that he had been making his day more than when he was in “third grade.” Marco said if he could change one thing, he “would change that when we write in our journals we could describe more about what we did and what we didn’t do. I think that will tell you we actually did it and that we will keep on doing it over again and saying new things too.” In the post interview, Isaiah also asked if we were going to do this again next year and stated, “the time I spent together was very fun like you were my school friend like a teacher school friend; I never had one of those.”

Changes in student desire and ability to demonstrate increased ability of skills and overall increased engagement in the intervention over time were the most noticed and documented areas of impact, as posed in research question one. Both students made progress in their ability to show the skills discussed in the intervention by the average increase in percentages cited in the observation protocol and engagement evidence in the researcher journal and student interviews also showed impact on the desire students had to participate in the intervention and its various aspects including peer mentoring, ISS

and video modeling. Together, these aspects may have aided the boys' in their overall increased ability to demonstrate these specific skills over time.

Research Question Two

> RQ2: When participating in a comprehensive approach including peer mentoring, interactive social stories and video modeling, what are student perceptions of the behavioral effects?

One of the most noticeable results obtained through the use of student interviews and vignettes was the students' ability to express perceptions of their own behavior and the growth in the perceptions of others' behavior. Both target students demonstrated a progression in their ability to express their views on their own behaviors and that of others from mid-interviews to post-interviews. Their responses illustrate a change in their perceptions. In addition, Isaiah's progression of responses further illustrated a change in his own continuum of autonomy, making several connections to a heightened sense of meaning from performing certain behaviors.

Awareness of Behaviors

Awareness of Behaviors in Student Interviews. The transformation of the boys' responses from the first interview compared to the last interview provides insight into the progression of reflection that took place when given the same question stems for both interviews in regard to their own behaviors and the behaviors they realized others saw in them. In the first interview, when asked why he was able to make good choices, Isaiah replied with, "The white smoke let the black smoke away. They put it in jail and they made me do good. The little Isaiah's are guarding the black smoke just to make sure so it

doesn't get out." When asked the same question at the end of the intervention, Isaiah was able to pinpoint his own behaviors more clearly by using less ambiguous terms. He answered why he made good choices by saying, "I got all the bad Isaiahs out. I can start listening again." A demonstration of the same awareness occurred when Isaiah was asked if he was getting better at making good choices, in the first interview he only replied with, "the white smoke." In the final interview he commented on the same question, "I am getting better at making good choices. I am getting great at making those choices! Raising my hand and sitting down and here comes a new one, I have been doing what the teacher says." Jeremiah also progressed in his own awareness of his behaviors by answering in his first interview "yes," only when asked if he thought he was getting better at making good choices. When he was asked which choices, he did cite "like keeping my feet flat on the floor and raising my hand to answer a question." In his last interview he said, "Yes, because I have been stopping all the bad choices and getting all the good choices like sitting down and raising my hand and not talking. Because I meet with you and see what I am doing in the videos." Later in the interview, he cited how he is making his day more this year and when asked why he said, "I just don't know about that." In the last interview, Jeremiah stated specifically, "meeting with (the researcher) in the morning helps me because we see ourselves on the videos and we know what we are doing and we can fix it. Like sitting down and not calling out. Instead, I can raise my hand to give the teacher an answer and so I could go to the bathroom." This illustrates that although he was able to specifically state behaviors in the first interview, he was more able to refer to why he thought he was getting better at those behaviors in the

second interview. He was even able to pinpoint the cause of impact to those behaviors as the videos, therefore becoming more aware of what may attribute to his own choices. Isaiah also specifically stated the good choices he was making by saying, “Alright, I have been sitting in my chair and having my eyes and feet facing the teacher and I have been alright facing forward and listening.” These are statements that illustrate the boys’ enhanced ability to name specific areas explicitly taught in the intervention to not only reflect on but also improve on.

Marco, the general education peer, was also interviewed to describe what effects he saw in the changes in perception of behaviors for the target students. As mentioned earlier he stated the intervention helped because it made the target students “smarter” and that the researcher taught what an active listener was and how to raise hands. When asked what he thought of the ISS he said, “I think it encourages us to like, it won’t look at ourselves, but then we can when we look at ourselves we can do the same things that you showed us before the videos of ourselves. When I saw the video you showed us I imagined it was me and that when we told you the mistakes or corrected the mistakes the boy did, it felt like they were correcting the mistakes I did, like I was imagining myself.” This may speak to the ways in which the ISS helped the boys see themselves as others see them.

Both target students gave more information and details on their own perceptions of their behaviors from the first interview to the last interview. Both were able to specifically cite behaviors discussed in sessions as reasons why they were able to make good choices in the last interview as well. Marco also gave insight into what happened in

his perceptions of his own behaviors providing insight into how the strategies of the intervention helped him.

Awareness of Behaviors in Vignettes. Isaiah and Jeremiah were asked to answer questions based on a fictional situation for another boy who was placed in a position to make a choice. The progression of their answers further illustrates how they became more aware of others' behaviors. These vignettes were given at the same time as the student interviews for Isaiah and Jeremiah, right after the skill raising hands had been introduced. In the first vignette, Isaiah and Jeremiah commented exactly the same on how they would advise the boy in the story by saying, "he should raise his hand and tell the teacher." In the last vignette interview, both boys were given the same scenarios and had different comments, illustrating their new awareness of choices and consequences. Isaiah said, "Andrew should raise his hand and tell his teacher the answer and the teacher may give him a high five." Jeremiah also commented on his last vignette interview to the same scenario by saying, "He should raise his hand and give his best answer he thinks to the teacher. He shouldn't call out and his feet should be flat on the floor and he should be listening." In the second vignette scenario the situation depicted a boy beginning to get upset because everyone around him was talking and not listening to him in a group setting. When asked to give the boy advice on what to do, Isaiah commented on how to help the boy by saying, "he should just relax and get all that storm dust out." Jeremiah said, "He should not yell." In the final vignette interview you can see how their responses were filled with more description on what the boy could do. Isaiah stated "he should tell the teacher and have a concern on them or just ignore and maybe the student will adjust

their own points. I would tell him to be good and not break his arm." Jeremiah stated, "He shouldn't yell, he should raise his hand and tell the teacher if they continue to do it so they can please stop."

Overall, the vignettes demonstrated the change in awareness by documenting an increased expertise in their answers by the second vignette interview. They showed they had more options in choices for the example boy to do. In showing this, they showed enhanced ability to help and identify these types of situations for others and came up with resolutions on their own.

Change in Autonomy

As discussed previously in the Self Determination Theory (SDT) framework, intrinsic and extrinsic sources of motivation impact social development and individual differences in ability to perform an activity (Deci & Ryan, 2000). Self Determination Theory further explains that social and cultural factors can facilitate or undermine one's overall sense of initiative and well-being, thereby affecting the quality of their performance. There are four distinct forms of extrinsic motivation: external regulation, introjection, identification and integration. Each is influenced by progressively higher perceptions of autonomy. For Isaiah and Jeremiah, the changes in their interview responses from the first interview to the last interview demonstrated a progression over this continuum from external regulation to aspects of integration. Responses were plotted on a continuum according to the criteria that characterized each form of extrinsic motivation.

In Isaiah's first interview, his responses referred to his actions being highly controlled by someone else's conditions and in attempt to avoid feelings of regret. He stated that he performed to satisfy a demand or avoid undesired consequences, placing his responses as external regulation on the continuum. As examples, when asked what he was doing to help him make his day, he said, "I have been doing my work and my homework which I finished my spelling and my math and my times. I am being a good active listener." He also stated, "If I made a bad choice I was afraid I was not going to make my day. I made the good choice to make sure I made my day." These responses demonstrated low autonomy because they were to satisfy the demands of the school-wide behavior program. Isaiah also demonstrated some responses that were characterized by pressure or in an attempt to avoid guilt or anxiety or to enhance pride or self-esteem which were categorized as introjection. These examples included responses to good choices he had made, "yesterday I only got two 39s (make your day points) and it means I did my best" and when asked how the meetings have helped, he said "it helps me to have good days by doing my work and doing all the reading we have been doing. It helps me do good in my class and everywhere. When we watch some videos of us doing good stuff and that helps me." He also stated, "I feel proud of myself" and "sometimes I have bad days, I don't get make your day slips but my day goes horrible," characterizing some aspects of pride, also outlined in introjection. Although most responses in the first interview fell primarily in the categories of external regulation and introjection, the first two forms of extrinsic motivation, one comment did fall under the identification category because it identified a value or personal meaning behind the skill and endorsed the goals

of the skills. The response started to have relevance to Isaiah's interests. When asked how others felt when he made these choices, he replied "they wanted to be your best friend" and his teacher "wanted to send a good day note." He also said, "I have been controlling my actions; I have not been throwing stuff."

Looking at Isaiah's responses for the second interview, his responses were still reflective of external regulation and introjection, but more responses could be classified in the area of identification and some showed aspects of integration. For example, when asked how he felt about his choices, he stated, "I feel like I want to burst in joy when I make the good choices and the teacher gives me an A or sends me a good note home about my choices. Well I am trying my hardest to make those good choices." He also started to identify with the value and personal meaning of his behaviors as part of the identification category when he responded to whether meeting with (the researcher) has helped him make better choices, he said, "yes, it helps me make better choices. We get to watch the videos on what we have been doing and it helps me be good and the bad times I have been bad I can fix things to be good for the teacher." For a response to be considered as evidence of integration, they had to include high levels of autonomy and self-determination and correlate to one's needs and values. Social values can also be presented as well as aspects of self-regulation. Getting to the integration category is an ongoing process that occurs throughout one's life but the previous three categories, external, introjection and identification, should be satisfied before getting to this point. Isaiah's response to how he thought his behaviors made others feel was "they felt proud of me, that they wanted to get me on their team or something and they wanted to be my

friend" and when asked whether he enjoyed the sessions, he referred to enjoying the time he spent with the participants and commented on how the researcher was a teacher school friend and how he had never had that. He referred trying his hardest to make good choices as well, which showed self-determination in order for the good consequences to happen.

For Jeremiah his responses reflected aspects of external regulation and introjection primarily for the first interview, with two responses categorized under identification. His responses reflected more external regulation. For example, he stated why he thought he made not so good choices by saying, "I just wanted to get out of work and not do my work" and so "my mom can take us out for ice cream." He also listed behaviors to satisfy a demand by stating the behaviors he thought he was getting better at, "like keeping my feet flat on the floor and raising my hand to answer a question." He also specifically stated "Like standing up, I feel bad that I don't want to do better because I can get in trouble or things like that" demonstrating that he wanted to satisfy a demand and avoid an undesirable consequence. He had several responses that could be interpreted as introjection, such as his responses to how he felt when he made a good choice, he said, "I feel great and want to keep doing it" showing pride in his feelings. He also stated, "others feel happy and want me to keep doing it." His responses moved toward identification because of the value and personal meaning he gained, when he responded to if the meetings were helping him to make better choices, he answered, "I can see like I get better and I get to watch a video and see what I am doing so I can fix it and get better."

In his second interview, the responses reflected introjection and identification but were moving toward aspects of integration. For example, he started to use language stating specifically making people proud, “I want to make my day and make my parents proud” and when asked how others felt when he made good choices, he stated, “I think they felt good and they want me to keep doing it over and over; my parents and my teacher. My parents are rewarding me and sometimes my teacher sends good notes home.” He made reference to the consequences that made him “prideful” and raised his self-esteem, but he started to see the personal value doing the actions. He started to see how he could impact these behaviors and raise the value and personal meaning out of doing appropriate behaviors when he answers whether he thought he was getting better at making those choices, “yes, because I have been stopping all the bad choices and getting all the good choices and getting better and better, like sitting down and raising my hand and not talking because I meet with you and see what I am doing in the videos.” Certain responses also reflected a self-determination of fixing the behaviors he wanted to see get better by further stating, “We see ourselves in the videos and we know what we are doing and we can fix it, like sitting down and I raise my hand so I can give the teacher an answer or so I could go to the bathroom.” He also stated, “I like how we talked about how to raise our hand and why and what it looked like to be an active listener and why it is important to give the teacher an answer. It told us like what we can do on there to make us better at it. I liked watching ourselves on the videos so we can see what we did so we can fix it.” His social values and connection between the behaviors to his social outcomes also emerged when he said, “Marco and Isaiah also kept helping me because I kept not

hearing the teacher and I don't know and they tell me. Once I forgot and Marco came to tell me we were supposed to silent read. I liked it when they caught me doing good."

The more internalized the extrinsic motivation, the more autonomous the person will be enacting the behaviors, moving closer to true internalization (Deci and Ryan, 2000). While social contexts, or environments, can enhance or forestall the internalization process, autonomy must be present for a student to reach aspects of internalization. The student must find value and social meaning in doing the activity on his own and within his own capacity. Interview responses primarily showed aspects of external regulation and introjection in the first interview and showed more of a tendency to move toward introjection and identification primarily in the second interview. Isaiah had more illustrative responses falling most close to the integration category but Jeremiah had aspects of his responses that showed he was moving toward integration. It is also important to note that aspects of this continuum are meant to be ongoing and whereas one instance or sentiment may best fit under the category of integration for one activity, a similar activity sentiment may be best categorized as external regulation. The target students' sentiments were all concerning the skills and behaviors introduced in the intervention only and these responses relating to these behaviors are what was categorized and documented as moving along the continuum. Integration is an ongoing process that can be demonstrated in many ways on movement to becoming intrinsically motivated. Perceived influences in personal families and friendships and the view others had on their behaviors played a role in their overall progression of their responses demonstrating that the environment in which these motivations develop may rely heavily

on the relationships that surround them, catering toward the value and personal meaning noted in the identification category.

CHAPTER 5

CONCLUSION AND IMPLICATIONS

Many factors contributed to the results attained. This chapter will initially identify the limitations of this study and then review the warranted assertions that can be made from the above results. Then, an explanation of how this study may have certain implications for future studies is discussed.

Limitations

As with many studies, several limitations may have affected the overall effectiveness of the intervention. Although careful considerations were taken to make sure all factors contributing to the intervention were intentional and purposeful there were some aspects that may have attributed to certain outcomes. These aspects are discussed here.

Time. In an effort to accommodate maturation over the course of the students' fourth grade year this intervention was done over the course of ten weeks in the students' first semester of fourth grade. The time spent on each skill was limited to six sessions and of those six sessions two were dedicated to lesson and discussion, two for ISS and two for review of video modeling tapes. Because it was the intent of the study to affect the three most crucial and basic behaviors to facilitate learning in the general education classroom, these sessions were limited and could not be expanded further. For this reason, the lessons were also meant to build upon knowledge from the previous skill and expand by way of reflecting on how these skills are connected. Therefore, although growth was made in skill acquisition overall, more allocated time to each skill

development may have afforded a more complete and consistent demonstration of the skills.

More time for each session could have also affected the outcomes of the study. Because of arrangements after school and other extra-curricular activities the students and researcher were involved in, the intervention time was limited to take place before school for 25-30 minutes. This was somewhat problematic in the beginning as all the students had siblings to care for in lower grades and had the responsibility of bringing them earlier as well, most times walking with them to school. This caused students to be late more frequently in the beginning of the study as they adjusted to getting there early. Siblings were cared for by the special education paraprofessional while their fourth grade siblings were attending sessions. The special education paraprofessional was absent on one day of the session and the siblings had to stay in the room while the participants had their session.

Expansion of Components. The researcher created two ISS scripts but due to unforeseen circumstances and lack of time and resources in the summer, only one ISS application was able to be properly filmed and produced in time to implement in this study. While there was an adequate amount of skill demonstration to draw upon in the ISS that was presented, had there been two ISS to draw reflection upon, the students may have been able to see expectations and application of skills in a different environment and in a different lesson.

More Observation Sessions. Because the researcher was also a teacher on campus at the school, observational sessions were limited to one per week due to the accessibility

and schedule of the researcher and students. Also, certain weeks in the intervention study were shortened due to holidays, making it more difficult to plan for concrete observational recording sessions. Observational recordings had to also be schedule during the times in which Isaiah was not being pulled into his small group resource setting. For these reasons, more observations were not taken. More observational recordings may allow for a more in-depth picture of the student acquisition of skills.

Data Tools. It may have been helpful for the researcher to have taken formal data from the students' classroom teacher in the form of a survey or interview. Because the teacher had intermittent observations to share with the researcher, it would have been fitting of the researcher to offer the teacher a forum to voice her opinions on the changes in behavior. On the same accord, student interviews were only taken at mid-point of the intervention and post intervention. It may have been informational to also ask the students perceptions on their own behavior prior to the start of the intervention apart from the vignettes. Responses could have given insight on initial aspects of motivation or understanding of expectations.

In addition, the raising hand skill and the academic responding skill were skills that proved to be very reliant on the opportunities given for the students to demonstrate them and therefore, difficult to consistently track. If the observation session took place during a time there was direct instruction and hand raising was not a needed or prompted skill for that ten-minute interval session, it was hard to determine whether the participants were appropriately not using that skill. Since this skill combined many reasons as motivations for hand-raising including to use the restroom, get water, answer a question,

pose a question, state a comment, etc. and, it was beyond the researcher's knowledge to determine whether the student had appropriate answers for the teacher's questions or if he was not raising his hand because he truly did not know. The only way this skill was concretely determined was if the student did not get up unwarranted during that time, but 0 occurrences was not necessarily a low score if the student did not need this skill. Also, if the teacher was to prompt the class and the student did not choose to raise his hand and provide an answer the researcher could not possibly determine whether the student did or did not have an academic response to give. So, again, a score of 0 is misleading because the skill may not have been needed for every session. Having a protocol to better accommodate or track this skill and possibly pre-defining a target percentage for each session in hand-raising prior to the study can prove extremely helpful. Possibly even looking at a typical peer to help alleviate what a good percentage may be, or keeping a log of the number of questions the teacher asks may also provide a ratio of the times he is choosing to answer by raising his hands to number of prompts, however this can also be problematic if the student does not know the answers. Another aspect to ameliorate this aspect is to co-plan with the teacher to intentionally place questions that were pre-discussed with the student and determine whether he is answering by raising his hand whole group. Table 1 states the types of lessons for each observation session.

Academic responding was also subject to the amount of opportunities presented during the ten-minute observational session. This skill, however, was expected for the majority of observational sessions in this study. In cases with an explicit instruction

session with minimal opportunities to respond, a coinciding note area on the protocol gave better insight to the researcher on the lesson background, such as session ten.

Overview and Summary of Results

The impact of the intervention as whole was apparent in several ways. First, the changes in behavior were evident as documented by the observation protocol recordings and the progression of changes outlined in the researcher journal, student journal and model peer interview. It was also evident that participating in the intervention proved to be engaging for the students through aspects of the researcher journal and student interviews. When gauging perceptions of the target students' behavior, they became aware of certain behaviors of themselves and the behaviors of others through documented data from interviews and the vignettes. Through reflection and heightened perception awareness of behaviors target students also started to realize the value and meaning behind the behaviors and moved toward aspects of autonomy and intrinsic motivations for performing certain behaviors.

Change. One resounding aspect of impact driven by this comprehensive approach to teaching classroom skills was the effect it had on the change in the specific behaviors over the course of the intervention sessions, as measured by the quantitative observation protocol, researcher journal and student journals. The changes that took place behaviorally were among the most significant areas of impact for this intervention. For this reason, a warranted assertion could be made that positive behavioral effects were made possible due to the strategies outlined in this study. There were a culmination of factors aiding this outcome but the most significant contributing factor may have been the

opportunities that were given to the students to observe themselves and others and change behavioral choices as a result of the reflection that took place after making those observations. Also the ability to compare the consequences taking place after such behaviors was influential in their continuance in making those positive choices. The lesson discussions, the ISS, and the video modeling were essential in prompting these aspects of self-reflection to happen but it was really the observation protocol, journals and interviews that aided in helping to track the specific changes taking place through illustration of how these behaviors were manifesting themselves in the general education classroom.

Another key factor contributing to the changes noted in the behaviors was the consistent proliferation of positive reinforcements throughout the intervention that aided in creating a culture of support and encouragement among the participants. These reinforcements came in the form of student compliments and "high fives" as well as words of encouragement at first prompted by the researcher but ultimately initiated by the students. This culture was an unexpected driving factor in the further motivation and desire for the participants to improve in their behaviors. This culture was illustrated and summed up beautifully through Marco's comparison story about his mother and her friends helping her to get better in math. This was also evident in Isaiah's efforts to focus on behaviors that were pointed out by his peers in his journal.

Engagement. Another resounding aspect made evident from this study was the engagement students demonstrated in participating in this intervention as characterized by the friendships that developed, desire for self- improvement, reflective connections

students made to the positive consequences that took place as a result of the behaviors and enjoyment in participating in the video self-modeling. This was evident by student interviews and researcher journal. For these reasons the researcher can conclude that student participants were engaged in the strategies and the effects of the intervention as a warranted assertion.

As stated above, the culture of support and encouragement affected many aspects of the intervention. The students began to rely on each other "catching" them and felt comfortable enough to share the areas of weakness to improve upon toward the end of the intervention. These students had not been in the same class prior to this year, and perhaps, the vulnerability the target students went through in picking out their weaknesses to publicly reflect and build on aided them in gaining trust in their peer model and essentially aided in the friendships that coincided. Also, the encouraging nature the peer modeled catered to a non-threatening "safe zone" for the boys. In the research journal it was cited that Marco was apparently trying to find positive correlations to behavior for the target students. So, this positive culture surrounding the interactions between the boys helped them to further become invested in growing in their own areas.

It is also possible that the role of the researcher as a participant had a specific effect on the outcome of how much the students enjoyed participating in the intervention. Because the researcher was not a teacher of any of the participants during the intervention she was left to be completely objective regarding the behaviors and consequences of the behaviors, engaging or modeling in the reflection process with the students instead of to

the students. This was evident in Isaiah's reference to the researcher being a "teacher friend."

Awareness of Behaviors and Continuum of Autonomy. Ongoing reflective insight throughout the intervention prompted the students to think critically about their behaviors and the consequences they had control over every day as a result of those behaviors. Consequently, the target students were able identify and refer to the specific behaviors that aided them in attaining said desired consequences. Because they were able to see the behaviors in the ISS and then put into practice the behaviors discussed in their own classrooms, they were able to heighten their awareness of these behaviors in themselves and pinpoint them in others, as illustrated in their descriptive advisories in the vignettes. When they could articulate these behaviors more precisely as shown in the interviews, they were then able to use them as a reasoning why other desired consequences happened. This was crucial in their ability to attach meaning and value in doing the behaviors which catered to their progression and movement on the continuum of autonomy. The comments the target students made in reference to pride and social outcomes further illustrated the meaning they attached to performing those behaviors and this was shown as an overall movement on the extrinsic continuum of motivation from external regulation to some sentiments displaying some aspects of integration. For these reasons, the researcher can make the warranted assertion that students gained a deeper understanding of their behaviors and those of others through the participation of this study. In addition, this heightened understanding caused a movement for the target

students across extrinsic motivation categories, allowing them to enhance individual autonomy.

While all assertions were constructed based on data received from individual tools outlined above, these assertions were found to directly affect one another. While specific intervention strategies such as lesson discussion, ISS, video modeling and the coinciding friendships that developed affected the overall engagement and initially drove their participation, it was the change the students observed in themselves that ultimately impacted continued engagement. Engagement and change worked cyclically to further enhance student self-awareness and the awareness of others' behaviors. The three-course cycle of the intervention allowed this awareness to be strengthened each time the students were able to see themselves and receive positive feedback. At this point, students were then able to start correlating their behaviors to desired consequences aiding in their motivation to choose these behaviors, and coincidentally moving their responses in categories across the continuum of autonomy. Figure 3 illustrates how all warranted assertions are related.

Mixed Methods Benefits

Having both qualitative and quantitative tools to draw data was crucial in ascertaining the overall, in-depth view of effect this intervention had on the target students. If not for the quantitative observational protocols, it would have not been possible to quantify to what degree the behaviors changed in the classroom or to see if the intervention had any influence on the behaviors, which was an original goal of the intervention. The reflective insights conveyed through all the qualitative tools were

driving the behavioral changes performed in the observations. It was important for the researcher to not only affect the behaviors but gain a deeper understanding of why these changes were taking place and the qualitative tools enabled this to happen.

While the qualitative tools provided reasoning behind the actions, they also served as a reflective outlet for the students. Although many aspects of reflection occurred during the sessions, the interviews posed as another outlet for students to make connections and realize the effect of participating in the study. This was made evident in their answers pertaining to the effectiveness of the videos and watching themselves. Had it not been for the interviews, it is quite possible the students may not have been able to make that distinction in reasoning. Much like the interviews, a tool that also played a great role in probing greater thought for the students was the student journal. Having a short time to think and write before sharing out areas to build on was essential in tracking student perceptions of behaviors (RQ2) and then asking the students to answer whether they performed the behavior or not in their class accommodates to answer whether this insight impacted their behavior (RQ1).

Comprehensive Approach Benefits

The comprehensive approach including integration of peer mentors, ISS and video-modeling opportunities was essential in the changes in behavior and perceptions. One of the key reasons why both target students were able to increase their abilities in all three behavioral skills just after the first session was highly contingent upon the presentation of the lesson and discussion prompts that relied heavily on the peer discussion. The nature of the first lesson initially prompted them to think together on

reasons why we attend school and what our goals are in coming to school. After they generated many responses including getting smart and learning for the next grade level, the researcher then prompted how this was to happen. A plethora of responses were generated among the students and among which included raising hand and participating in the lessons our teachers prepare. These responses would be used later when raising hands and academic responding would be formally introduced, however, students started to reflect on these aspects as a whole from the very beginning and used these self-generated ideas to carry and build upon throughout the course of the intervention. As the researcher wrote all their responses down and pinned up this list for each session, students were making connections about raising hands and participating while attention to task was the only formal behavior being taught. They were noticing other behaviors in the ISS and video modeling as they knew them, even though we had yet to formally discuss it. The ISS and video modeling presented a unique way to not only show the behaviors discussed but bring about thought as to the reasoning why the boy-actor chose to make certain choices and then why the students make their choices. For all these reasons, scaffolding up to, or building up to, the students' own abilities to show these behaviors proved to be necessary for the students to come to their own understandings. Table 1 shows how the approaches were scaffolded.

Students were able to become cognizant and aware of themselves and their choices through this the comprehensive approach. Isaiah, namely, was able to see himself as others see him and use common language to describe the behaviors due to the succession of strategies. The comprehensive format allowed students to feel successful in

their choices before being video-taped through the use of “catching” made possible by the peers and their inherent modeling. With this, came the positive reinforcements among the students. The ISS and video modeling soon became a mere vehicle for opportunity to compliment and encourage among the students. If the succession of approaches not been in place, it is unclear whether the students would have internalized their own behaviors before being able to actually see themselves (Table 1).

Implications

The goal of this study was to impart necessary social and communication skills among a student with autism and a general education at-risk peer and gather insight on their perceptions of behaviors. In an effort to aide these goals there were many facets of this intervention that were meant to follow theoretical frameworks in social learning outlined by Bandura (1977) and Vygotsky (1978). In addition, Theory of Mind also gave insight into the inherent struggles students with autism may be exhibiting with predicting the actions of others (Premack & Woodruff, 1978).

The intervention strategies outlined in this study were intentionally placed so that students could have the opportunity to predict the actions of others by learning more about the behaviors that bring about positive consequences through explicit instruction of certain behaviors and modeling of these behaviors made possible through use of the ISS and video modeling. Students were then able to apply these skills observed from others themselves.

In Social Learning Theory Bandura (1978) stated behavior is learned observationally and labels and images can help the observation process. By integrating an

ISS and opportunities for the students to observe themselves, they were able to maintain and satisfy the four elements required (1) attention, (2) retention, (3) reproduction and (4) motivation. This also enabled valued outcomes for the students and positive feelings coupled with enhanced self-worth as necessarily noted in this theory (Bandura, 1978). This also enabled the necessary interaction between cognitive, behavioral and environmental factors.

Vygotsky (1978) states that a more knowledgeable other (MKO) is generally most impactful when consistently present to coach so enlisting a peer model to participate brought the necessary insight and appropriate modeling both students benefitted from. Marco also provided accurate frequent feedback and positive reinforcement for the target students throughout the intervention in and outside of the intervention sessions.

Correlations between this intervention and the theoretical frameworks that surround them make further direction or expansion of certain facets of this study seemingly beneficial. Because the video modeling proved to not only be a key aspect of continued engagement among the target students, it also enabled the observations of others and themselves which then prompted their own application of the skills. The video modeling served as the vehicle driving the reciprocal interaction among cognitive, behavioral and environmental factors. The video modeling also enabled the reflection of valued outcomes. Keeping this in mind, teachers and schools may benefit from integrating structured video modeling opportunities in their behavioral plans. Pairing these behavioral systems with tailored reflective pieces may provide enhanced skill acquisition in behavioral skills for students with autism and at-risk students, therefore

supporting the students' Zone of Proximal Development (ZPD). Tracking and researching the effects of intentional reflective strategies related to journaling and interviewing can also serve to heighten the awareness of certain behaviors.

Because student-to-student positive reinforcements were encouraged and ultimately fostered powerful friendships in this study, peer-centered mediation groups as part of an approach to social and communication goals may work to attain desired social skills for students with autism and at-risk peers. This aspect of the intervention was critical in enhancing positive feelings and enhanced self-worth among the target students. This was also crucial to satisfying motivation, another critical element of social development (Bandura, 1977). Vygotsky (1978) also asserted social interaction is fundamental and by offering a MKO to coach the target students, awareness of self and of others was made possible on a consistent basis throughout the study. Starting the facilitation of friendship groups at a young age and monitoring them over a long period of time may even contribute to a better understanding of autism over time and offer critical data on the change in motivations for students with autism.

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Table 1

Schedule a

	Session #	Content of Session	Strategy	Observation Session #	Content of Observation Session
PreWk 1	0	Attaining Baseline		1	Direct Math Instruction with Prompting
PreWk 2	0	Attaining Baseline		2	Independent Math Practice
Week 1	1	Attention to Task	Lesson Discussion	3	Direct Math Instruction with Prompting/ Ind. Practice
Week 2	2	Attention to Task	Lesson Discussion	4	Independent Practice
	3	Attention to Task	Int. Social Story		
Week 3	4	Attention to Task	Int. Social Story	5	Rotating Independent Practice
	5	Attention to Task	Video Modeling		
	6	Attention to Task	Video Modeling		
Week 4	7	Attention to Task/Raising Hand	Lesson Discussion	6	Independent Practice
	8	Attention to Task/Raising Hand	Lesson Discussion		
	9	Attention to Task/Raising Hand	Int. Social Story		
Week 5	10	Attention to Task/Raising Hand	Int. Social Story	7	Direct Grammar Instruction with Prompting
	11	Attention to Task/Raising Hand	Video Modeling		
	12	Attention to Task/Raising Hand	Video Modeling		
Week 6	13	Attention to Task/Raising Hand/Academic Response	Lesson Discussion	8	Group Review Activity
	14	Attention to Task/Raising Hand/Academic Response	Lesson Discussion		
	15	Attention to Task/Raising Hand/Academic Response	Int. Social Story		
Week 7	16	Attention to Task/Raising Hand/Academic Response	Int. Social Story	9	Direct Reading Instruction with Prompting
	17	Attention to Task/Raising Hand/Academic Response	Video Modeling		
Week 8	18	Attention to Task/Raising Hand/Academic Response	Video Modeling	10	Direct Reading Instruction with Prompting
	19	Celebratory Ending Session	Video Modeling	11	Direct Reading Instruction with Prompting

Figure 1

Multiple Baseline Method Across Behaviors for Isaiah

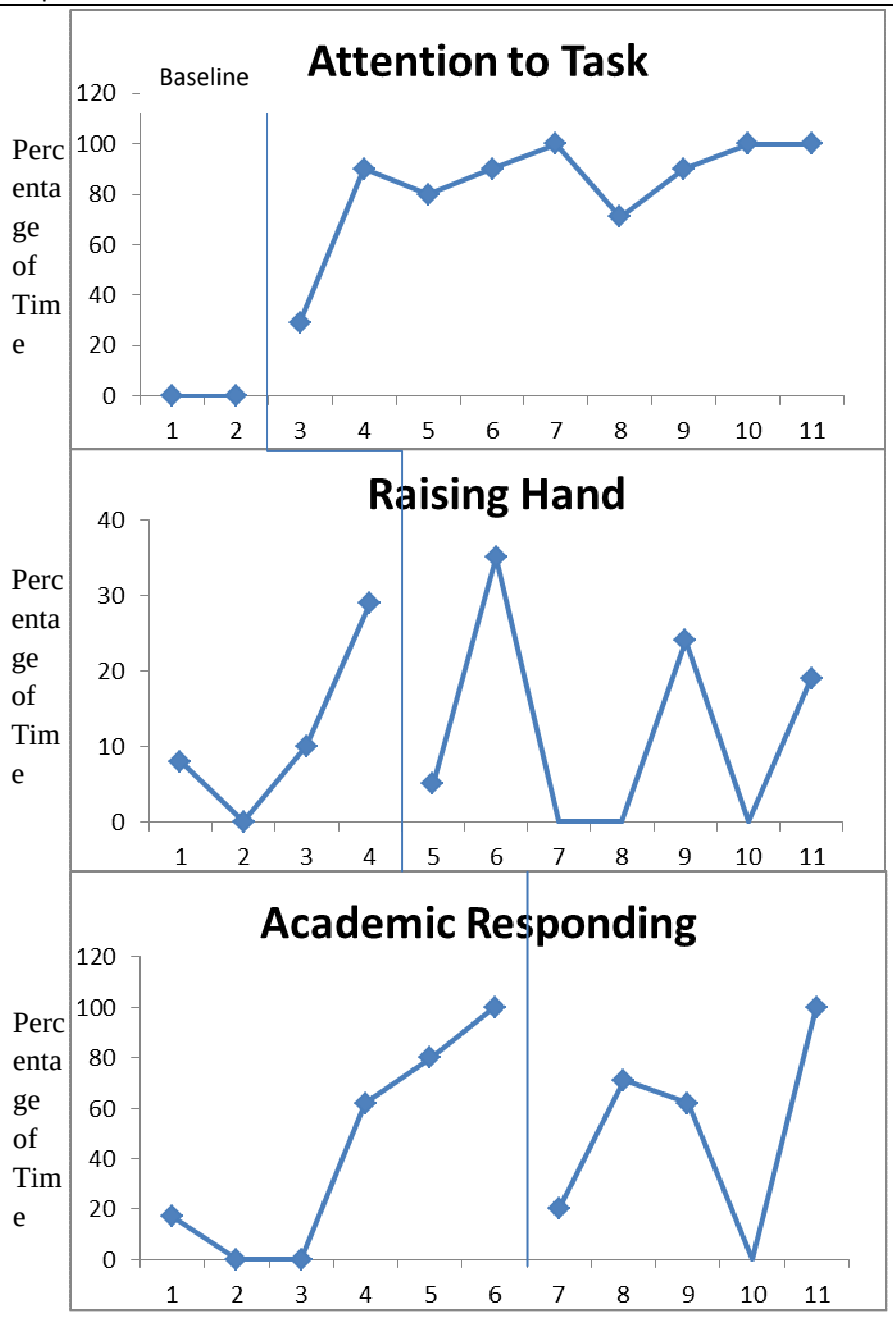


Figure 2

Multiple Baseline Methods Across Behaviors for Jeremiah

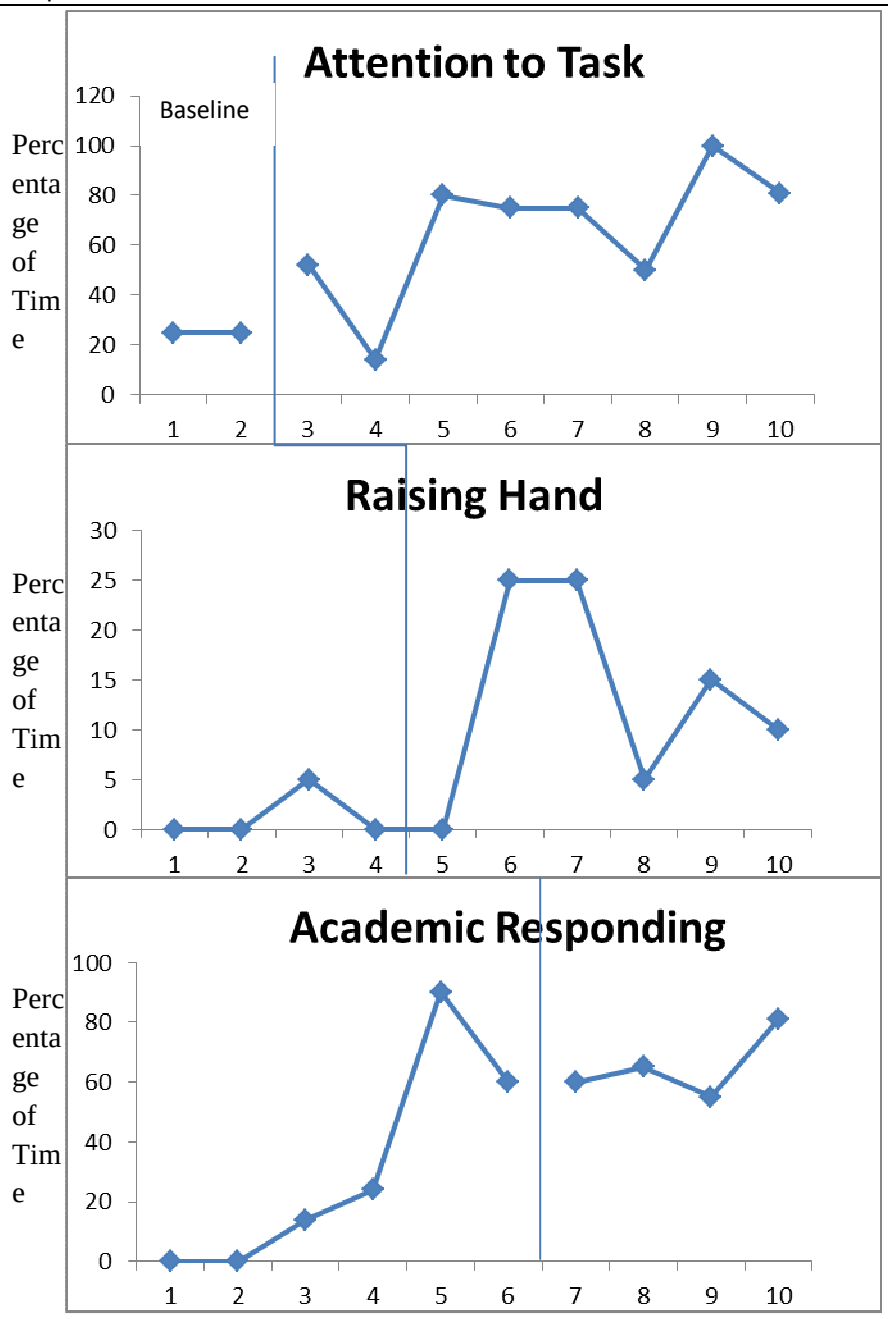
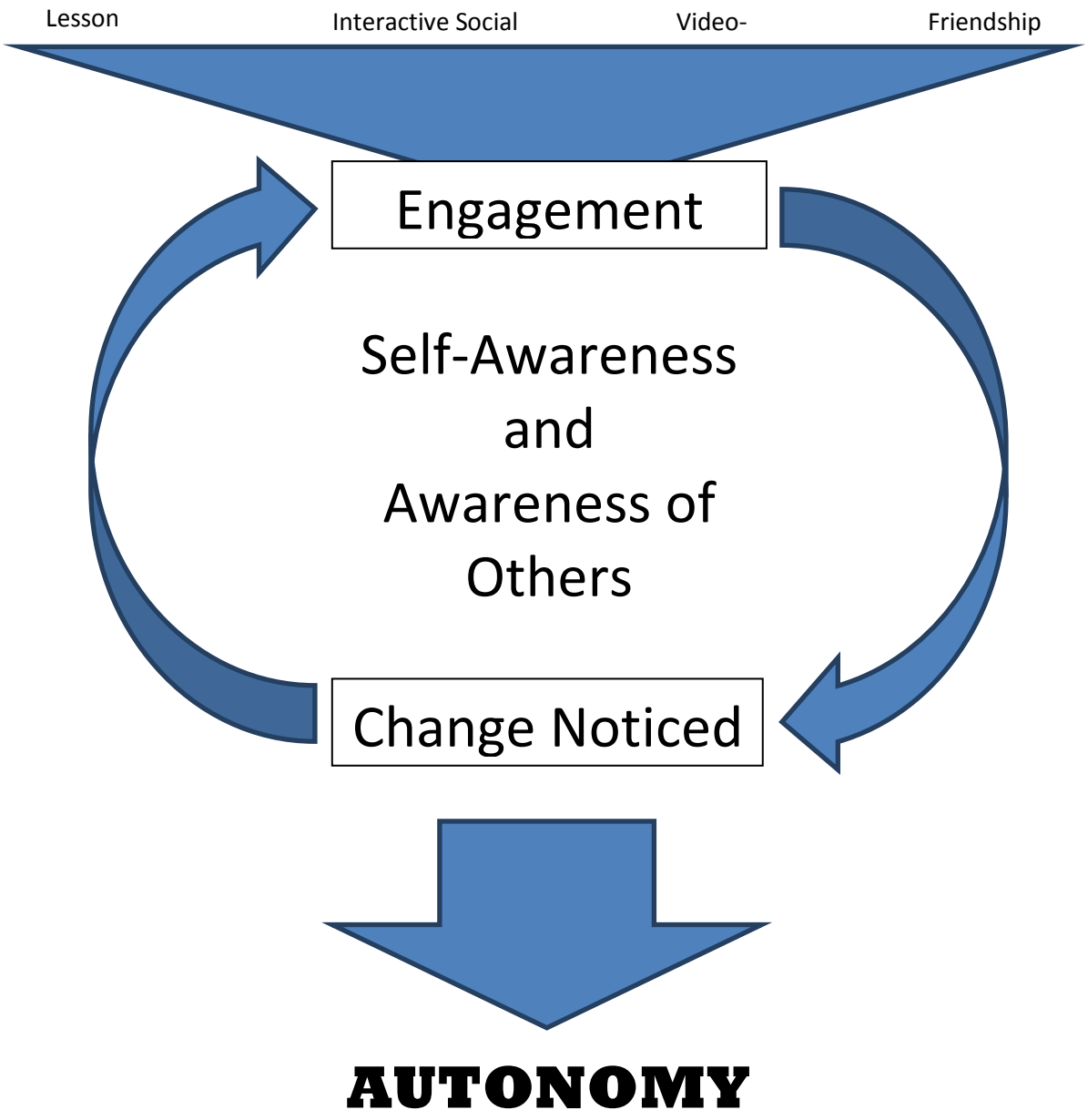


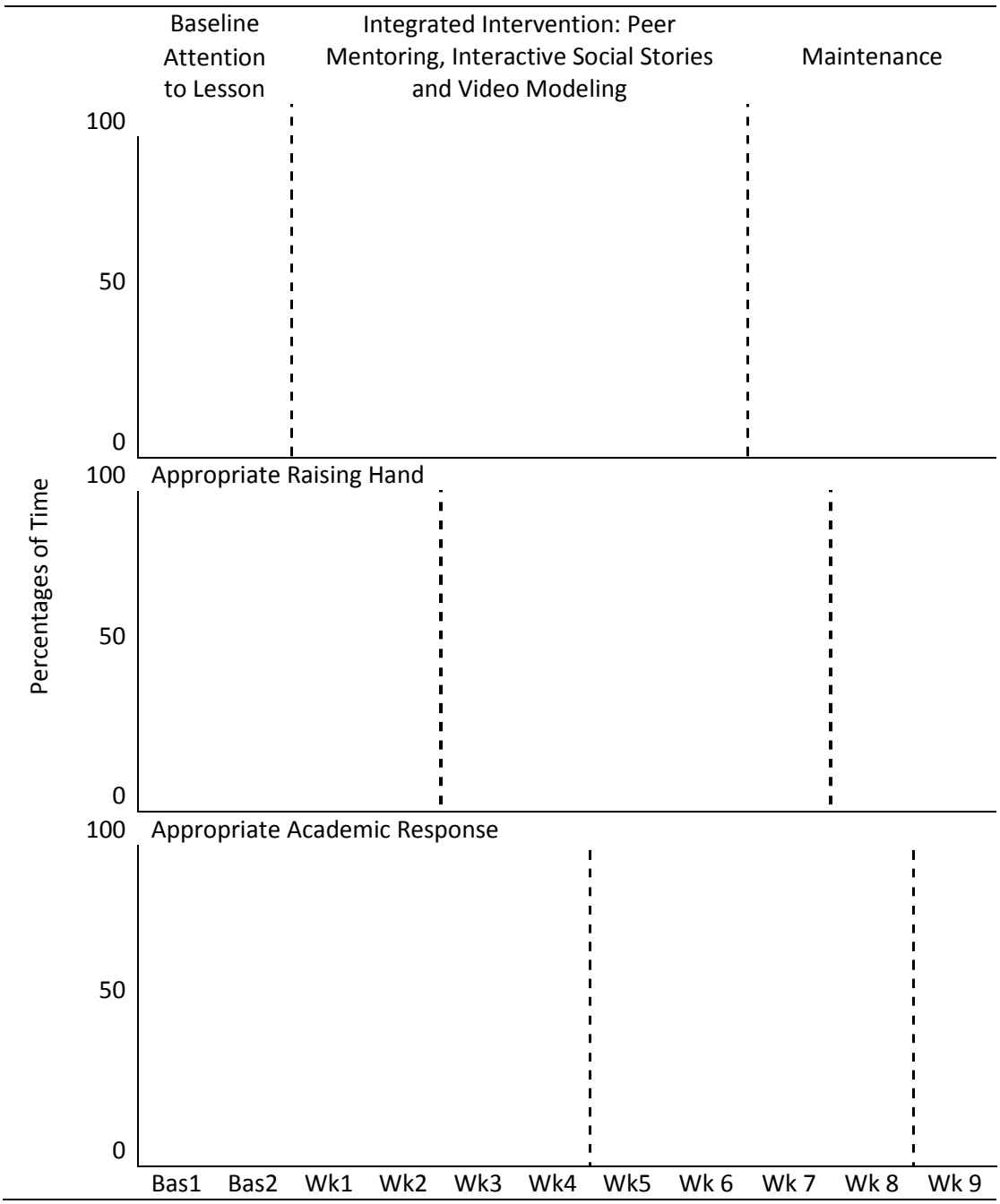
Figure 3

Culmination of Factors



APPENDIX A

MULTIPLE BASELINE APPROACH


Baseline
Attention
to Lesson
Integrated Intervention: Peer
Mentoring, Interactive Social Stories
and Video Modeling
Maintenance
Percentages of Time
100
50
0
Appropriate Raising Hand
Appropriate Academic Response
Bas1
Bas2
Wk1
Wk2
Wk3
Wk4
Wk5
Wk 6
Wk 7
Wk 8
Wk 9

APPENDIX B

LESSON PLAN SCRIPT SAMPLE: SESSIONS 1-6

Time	Session 1: Understanding Why Making Day is Important	Materials
	Key Points for Students to Realize • Making your day is important for your success • Making your day can bring great rewards	
5 Min.	**Expectations** Good Morning students! In order to earn your points this morning, you should bring at great attitude, which means you stay happy the whole time, we will not get upset or start to yell at all, you are try your best and work hard, it doesn't matter what answer you have if you are looking at me and thinking about what we are saying, be respectful to each other and use nice language such as good answer, great job, and last you have to participate, this means you will raise your hand to speak, wait until another student is done talking. You will not interrupt or talk while someone else is talking. Nod your heads if you understand or raise your hand if you have a question. **Opening** Today we are going to discuss why it can be important for us to make our day. Later we will talk about ways we can make our day and make good choices by raising our hand in class and we will even get to see what those choices may look like in an interactive social story movie.	Written Expectations and pictures of how each looks.
5 Min. **10 Min.**	**I do** But first, let's make sure we understand **why** it is important to make our day. I made a handy dandy chart to help us remember our talk today. It says "Why we should make our day," at the top, let's say that together, ready set, go: "Why we should make our day." It also has a sentence starter at the top that says "It is good to make my day because…."This chart will give all our reasons for making our day. Hmmmm…..why is it important for me to make my day? Hmmmm…..or what may happen if I make my day? I am letting you hear my brain think about this out loud right now. Is your brain thinking about what could happen if we make our day? Hmmmm…..I know! It is good to make my day because my teachers really want me to get smarter so maybe they will be proud of me? What do you think? Do you think our teachers will be proud of us if we make our day? *Yes.* Should I write that down under "Why we should make our day"? *Yes.* Ok, I will. Lets see, are there other reasons why I should make my day? If you have an idea, raise your hand and let us hear your brain think. **We Do** Can anyone tell me what might happen if we DO make our day? What types of things could happen if we DO make our day? (Wait for responses) *Possible responses: our moms will be happy, our teachers will like it,*	Big Sheet of Paper/ markers

5 Min.	*we get a prize, I don't know.* (I will agree and comment on each one and ask what specifically may happen. I will allow or prompt students to comment or I will ask students to comment on their responses and look at each other when they respond. I will get permission from the students to add to our charts and give praise for giving a great answer we all liked. The student may come up and write their answer) Will making your day make you happy? Why? What happens if we make our day every day? Do you know anyone who makes their day every day? Are they doing well? Do you think they are getting smarter? Why? Do you like making your day? Why? What happens for your at home if you do? Does it make you happy if you make your day? (I may also ask what each student thinks about each other's answers) *Possible responses: yes, I think it will make me happy, because I can earn my prize, if we make it every day our teachers will like it, yes, XXXXX makes their day every day and she is smart, I like making my day because I get my prize or my mom takes me to eat pizza.* Would you please write these down on our chart? Each of these will be discussed and I will ask each student if I can write them down. We will then repeat all the items on the list using the sentence starters. **You Do** Ok, we are almost out of time, I want you to take your special journal and write today's date and write one reason why it is good to make your day using this sentence starter we have been using. Then, we will share out, do points and be done for today. (They will be asked if they want to share out and I will give positive feedback to the ones that do while encouraging the students to give each other high fives and say great job thinking of that one.) I also would like you to think of a behavior you want to get better in. You will write this in your journal by saying "I would like to get better at _____ because _____. Once you have written this you may choose to share. If not, we will, as always be looking out for someone to "catch" doing a great job or showing the behaviors that we talked about today.	Journals

Time	Session 2: What Does Making Your Day Look Like?	Materials
	Key Points for Students to Realize • Making your day can mean sitting at your desk, raising your hand and being respectful to others. • Make your day doesn't look like shouting, getting up without permission or talking to others in a mean way.	
5	**Expectations**	Written

Min.	Good Morning students! In order to earn your points this morning, you should bring at great attitude, which means you stay happy the whole time, we will not get upset or start to yell at all, you are try your best and work hard, it doesn't matter what answer you have if you are looking at me and thinking about what we are saying, be respectful to each other and use nice language such as good answer, great job, and last you have to participate, this means you will raise your hand to speak, wait until another student is done talking. You will not interrupt or talk while someone else is talking. Nod your heads if you understand or raise your hand if you have a question. **Opening** Yesterday we talked about why it was so important we make our day, right? Who remembers that? Can anyone remember what we said? (Refer to the chart, so they can read one out loud.) I remember Andrew said this…… Today we are going to talk about what making our day **looks** like.	Expectations and pictures of how each looks.

5 Min.	**I do** Let's make sure we understand what making our day **looks** like! I made a handy dandy chart to help us remember our talk today. It says "What making our day looks like," at the top, let's say that together, ready set, go: "What making our day looks like" It also has a sentence starter at the top that says "Making good choices looks like…."This chart will give all our ideas on what it looks like to make our day. Hmmmm…..what does it look like when I make my day? Hmmmm…..or what do I do when I make my day? I am letting you hear my brain think about this out loud right now. Is your brain thinking about what you do when you make your day? Hmmmm…..I know! Getting up all the time without permission! That helps me to make my day, right? *No* .No? Ok, well, sometimes when I make my day, I earn points by doing what the expectations tell me to do, like staying in my seat? (I will act it out and ask like this?) What do you think? Do you think our teachers will be proud of us if stay in our seat while they are teaching? *Yes.* I think it is important to stay in our seats because it shows respect to our teacher while she is working hard teaching. Do you agree or disagree? Should I write that down under "What making our day looks like"? *Yes.* Ok, I will.	Big Sheet of Paper/ markers
10 Min.	**We Do** Lets see, are there other ideas on what making our day looks like? I know all of you have made your day in the past, what were some of the things you did to achieve that? If you have an idea, raise your hand and let us hear your brain think. Hmm…..what does making our day look like? (I may prompt them by asking the peer mentor to share with us his secret to making his day or ask them to hone in by giving a negative behavior and further leading them to the positive counteraction, like, is shouting out a good way to make our day?) *Possible responses: being nice to everyone, raising our hands, not saying no when the teacher asks us to do something* ****if they are giving answers in a negative aspect, like not saying no when a teacher asks us to do something I will ask for the better choice and write that down. So, using respectful language and saying yes, ma'am or ok.* (I will agree and comment on each one and allow the students to show what each of their responses looks like or myself or the peer mentor will act out what it can look like. I will also ask the students what may happen if we don't do the correct response and quickly go over some answers of what may happen if we don't.) What will happen if we don't raise our hands? Stay in our seats? How will that make our teacher feel? The other students in the class? How will that make me feel? Will that help me make my day?	

5 Min.	I will give special recognition to the one who said raising hands and I will show the wrong way to raise my hand and ask if I am doing it the way my teacher wants to see it done. I will ask someone to show me the correct way and say "Oh!" I will discuss further on this one and ask why it is important for us to do these things. Overarching answer should be to show respect to someone who is teaching us and helping us to get smart. How will they make us feel and our teacher feel? I will allow or prompt students to comment or I will ask students to comment on their responses and look at each other when they respond. I will get permission from the students to add to our charts and give praise for giving a great answer we all liked. The student may come up and write their answer. I will also ask students to show me what it looks like.) Lets read what we have so far together. **You Do** Ok, we are almost out of time, I want you to take your special journal and write today's date and write one behavior that you can use to help make your day. Then, we will share out, do points and be done for today. (They will be asked if they want to share out and I will give positive feedback to the ones that do while encouraging the students to give each other high fives and say great job thinking of that one.)	Journals

Time	Session 3, 4, 5, 6: What Does Raising Your Hand Look Like?	Materials
	Key Points for Students to Realize • Raising your hand can help us to make our day • Raising your hand does not mean shaking it around and yelling our the teacher's name • Raising your hand means sitting quietly and putting your hand in the air quietly	
3 Min.	**Expectations** Good Morning students! In order to earn your points this morning, you should bring at great attitude, which means you stay happy the whole time, we will not get upset or start to yell at all, you are try your best and work hard, it doesn't matter what answer you have if you are	Written Expectations and pictures of how each

	looking at me and thinking about what we are saying, be respectful to each other and use nice language such as good answer, great job, and last you have to participate, this means you will raise your hand to speak, wait until another student is done talking. You will not interrupt or talk while someone else is talking. Nod your heads if you understand or raise your hand if you have a question. **Opening** Yesterday we talked about what making your day looks like, right? Who remembers that? Can anyone remember what we said? (Refer to the chart, so they can read one out loud.) I remember Andrew said this……We also talked about if we do these things we can make our day and all the good things that can come from that. Can anyone remember those? (Refer to the chart) Today we get to see a short movie on the Ipad and we get to help a student make a good choice!	looks.
17 Min.	**Interactive Social Story** I remember Andrew said we should raise our hands when we want to talk in our classroom, give me a thumbs up if you remember that? He said it would be very respectful to show our teachers that we can be quiet while they are teaching and they will answer our questions when they are done talking. Right? Well in our movie today we will get to see how a student, Andrew, handles a situation that may be one we have been in before. Then we will get to help Andrew with a choice. Are you ready? If you are ready you are sitting with your hands in front of you and your eyes are right here. We will stop and talk about his choices. Be good listeners and think about what is happening in the classroom too. (We watch the movie) When it prompts the students to choose a choice. Today we are going to look at option 1. Lets see what happens if he chooses to shout out an answer. What do you think will happen. I will ask the students if it is ok to play this option so we can see what happens. I will have a chart with the sentence "It was not good for Andrew to shout because _____." As we watch, I will allude to someone from the session before and state how they were right. **I Do** Hmmm/…listen to my brain think, when Andrew shouted out an answer, the other kids were frustrated and we could tell because their faces were mad. Do you think they were happy with Andrew when he did that? Can I add that to my chart? Oh, so it was being disrespectful	Big Sheet of Paper/ markers

5 Min.	because he interrupted and interfered with their learning? Oh, I get it now. So you were right last time when you said others may get upset. Now we get to see what the teacher will tell Andrew. What do you think she will tell him? *Possible responses: she will get mad, she will put him on step,* Lets find out. I will play the rest of the consequences for that action. I will then ask the students if that is what may happen in their classrooms. I will ask them how Andrew may have felt? **We Do** Can you tell me some other effects from Andrew's choices? What else happened because he chose to yell out. I will allow student to come and add to the chart after we agree together that is a good answer. **You do** Since we are out of time, we will get to see the other choices Andrew chooses next time. Write the date and one sentence with the starter from our chart, It was not good for Andrew to shout out because _____ and you fill in a good reason why Andrew shouldn't shout out.	Journals

APPENDIX C

INTERACTIVE SOCIAL STORY APPLICATION SCRIPT

NARRATOR (WITH GRAPHIC): In this module, students will learn how to correctly sit in the appropriate listening position while participating in a lesson.

Ms. Markate: Good morning class! Before we get started today, I want to remind you that the expectation during our lessons is to stay in your seat. Sitting with your hands on your desk, your eyes on the speaker and feet flat on the floor is how I will know you are being an active listener. If you need to get up during the lesson please raise your hand and let me know. Remember, if it is to throw something away or get a drink; please wait until after the lesson. Thank you.

CLASS: Yes, Ms. Markate.

Ms. Markate: Good. Now, today we are going to learn and discuss antonyms. Antonyms are words that are opposites and have different, opposite meanings. Let's repeat that. (She points to this written on the board as everyone repeats)

Students (in unison): Antonyms are different words that have opposite meanings.

Ms. Markate: Great, thank you all for participating with me. Let's look at some examples. The words *happy* and *sad* are two words that are antonyms because they are opposites. The words *big* and *small* are also different words that are antonyms because they mean the opposite of each other. Who can tell me what an antonym for *hot* may be? I will know who is being an active listener by the way they are sitting in their chair.

NARRATOR: Andrew is making a choice in the way he chooses to show he is listening. How should he be seated? Choose either 1, 2, 3, or 4.

(1,2,3 and 4 play with Identifying graphics one at a time. Then become touchable links on the app.

VISUAL INTERACTIVE CHOICE 1: Andrew has his head inside the cubby hole of his desk and he is playing with two pieces of paper.

END SCENE

VISUAL INTERACTIVE CHOICE 2: Andrew is rocking back and forth in his chair and looking away from the lesson while other students behind him are trying to see over his moving head.

END SCENE

VISUAL INTERACTIVE CHOICE 3: Andrew gets up without permission to throw away a piece of trash and take a drink of water.

Students are trying to see around him as he walks right in front of the board and accidentally drops the trash and bends to pick it up in front of the lesson. The water fountain makes a noise and distracts several other students.

END SCENE

VISUAL INTERACTIVE CHOICE 4: The student is sitting correctly with his feet flat on the floor and his eyes are on the teacher.

Andrew is able to hear the question and raises his hand right away.

END SCENE

VISUAL INTERACTIVE CHOICE 5: The student has his head on the desk.

----------STOP----------

OUTCOME OF VISUAL INTERACTIVE CHOICE 1:

Choice 1: Student has head inside desk while teacher poses question.

All the students get frustrated and look at him while Ms. Markate waits on him and walks over to talk.

Ms. Markate: Andrew, were you able to hear my question?

Andrew: No

Ms. Markate: Why do you think that is?

Andrew: Well, I was not sitting the correct way.

Ms. Markate: I just finished stating the expectations for the way I would like you to sit; in the correct position so that you are able to hear and participate in the lesson. Plus, I can tell you are being respectful when you are looking my way when I teach. You may adjust your points for the day.

Andrew: Sorry Ms. Markate, I will adjust a point and I will sit in the correct position next time.

Ms. Markate: I like that you took responsibility and apologized. I appreciate that. You may adjust a point and we can try this again.

OUTCOME OF VISUAL INTERACTIVE CHOICE 2:

Choice 2: Andrew is rocking back and forth in his chair and looking away from the lesson.

Ms. Markate: Andrew, are you ok?

Andrew: I hurt my head but I am ok.

Ms. Markate: What do you think made you fall?

Andrew: I was rocking in my chair.

Ms. Markate: I see. Were those the expectations I discussed with everyone earlier for correct sitting position?

Andrew: No, ma'am. I think you said my feet were to be flat on the floor.

Ms. Markate: That is correct. Andrew, the expectations are for everyone's safety. If you were sitting with your feet on the floor and your hands on the desk, do you think this would have happened?

Andrew: No ma'am.

Ms. Markate: You really could have hurt yourself. We are lucky you didn't. Plus, while you were rocking, Lilly and Julie could not see over your head behind you because you were moving back and forth. You may adjust a point for interfering with your safety in the classroom and not demonstrating the correct learning position. Remember, we can't make our goal today if you continue to adjust points. I know you can show me the correct way to sit and listen in your chair. Let's try again.

OUTCOME OF VISUAL INTERACTIVE CHOICE 3:

Choice 3: Andrew gets up without permission to throw away a piece of trash and take a drink of water.

Students are trying to see around him as he walks right in front of the board and accidentally drops the trash and bends to pick it up in front of the lesson. The water fountain makes a noise and distracts several other students. Ms. Markate walks over to Andrew once she sees the students being distracted.

Ms. Markate: Andrew, what were my expectations for getting up during a lesson?

Andrew: I think you said to wait until the lesson was finished.

Ms. Markate: Yes, that is correct. Did you wait until the lesson was finished to throw away your trash and get a drink?

Andrew: No, I didn't.

Ms. Markate: You have distracted a lot of students in the middle of the lesson because you were walking in front of me and the board. Plus, the noise from the water fountain distracted others as well. It was interfering with their learning when you chose to get up in the middle of the lesson.

Andrew: I am sorry. I will adjust a point for not following the expectations and not waiting until the lesson was over to throw this trash and get a drink.

Ms. Markate: I really appreciate you taking responsibility. It is respectful to others that you show you are listening when they are speaking to you. I would really appreciate it if you were to show me you were listening as I give this lesson. Plus, I know that if you were sitting the correct way and waiting appropriately you may know the next answer and be able to raise your hand and answer it. Next time you have something to throw away or if you are thirsty, what should you do?Andrew: Raise my hand and ask after the lesson is over?

Ms. Markate: Thank you Andrew.

OUTCOME OF VISUAL INTERACTIVE CHOICE 4:

Choice 4: Andrew is sitting correctly with his feet flat on the floor and his eyes are on the teacher.

Andrew is able to hear the question and raises his hand right away.

Ms. Markate: Andrew, I love the way you are seated in the correct learning position! You look like you know the answer! What do you think?

Andrew: Yes! An antonym can be cold because cold is the opposite of hot!

Ms. Markate: Great job Andrew! That is correct! Your head is above the desk and your feet are flat on the floor and you are doing a wonderful job of watching the speaker! I think that because you did such a great job on those areas, you were able to answer the question! Keep up the great job!

NARRATOR: AFTER EACH CHOICE

If they pick 4:

GOOD JOB! YOU MADE THE RIGHT CHOICE TO SIT IN THE CORRECT LEARNING POSITION DURING INSTRUCTION

If they get either 1,2,or 3:

SORRY, THAT WASN'T THE RIGHT CHOICE! REMEMBER YOU HAVE TO SIT IN THE CORRECT LEARNING POSITION MS. MARKATE EXPLAINED BEFORE THE LESSON.

WHY DON’T YOU TRY AGAIN? (Navigation automatically takes them back to CHOICE MENU)

APPENDIX D

PROTOCOL DEFINITIONS

Code	Code Definition and Write Up
Attending to Task Behavior	This descriptor is defined as the student is looking or facing in the direction of the teacher, instructional assistant, reference to the lesson or written visuals related to the lesson in sitting position with his bottom in his chair and his head above the desk for at least five consecutive seconds. This will be noted on the protocol using an interval segment of 30 seconds. If the student can demonstrate the above defined behavior for five seconds at any time during the 30-second interval, the observer will write a tally in that interval timeframe.
Hand Raising	This behavior is defined as a student physically raising his hand, holding it still in the air and waiting quietly for a response from the teacher. This will be noted on the protocol using a frequency count within the 30-second intervals. Every time within an interval the observer will place a tally mark when the above behaviors are demonstrated.
Academic Responding	This behavior is defined as the student initiating any verbal communication in regards to the task of content. This may include but is not limited to talking about the content, asking a question, sharing with a partner, commenting about the content with a teacher. This also includes any written responding lasting more than 5 seconds. This will be noted on the protocol by use of interval recording. Every time this behavior is observed a tally will be placed in the 30-second interval time frame. • Verbal responding includes any responses that are verbal and social in nature. This may include, but is not limited to, talking about the content, asking a question, sharing with a partner, and/or commenting about the content with a teacher or aide. If the student is able to show these behaviors, no matter what format during a 30-second interval, the behavior was marked in the form of a tally for that interval as V for verbal distinction. • Written response was defined as any writing behavior related to the content being taught lasting at least five consecutive seconds. This was denoted on the protocol as a W.

APPENDIX E

OBSERVATION PROTOCOL

Date:															
Student Name:															
Time Start:															
Time End:															
Duration:															
Minutes:		1		2		3		4		5		6		7	
Second Intervals:	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec	30 Sec
Attending to Task Behavior															
Hand Raising															
Academic Responding															

APPENDIX F

STUDENT INTERVIEWS

I am going to ask you a few questions about the choices you make in your classroom. Don't worry, you are not in trouble nor is there a right or wrong answer. I just want to ask you questions so your teacher can better help you in your classroom.

1. Can you think of any not-so-good choices you have made in your classroom? Which ones?
2. Why did you make those choices?
3. Can you think of any good choices you have made in your classroom? Which ones?
4. Why did you make those choices?
5. How did you feel when you made those choices?
6. How do you think others felt when you made those choices?
7. Do you think you are getting better at making good choices? If yes, then ask: Which choices do you think you are getting better at?
8. Does meeting with Mrs. Zamora in the morning help you make better choices in class? How?

APPENDIX G

GENERAL EDUCATION STUDENT INTERVIEW

1. Can you describe any not so good choices you have made?

2. Why did you make those choices?

3. Can you describe any good choices you have made?

4. Why did you make those good choices?

5. Is there anything that makes you make those good choices?

6. How did others feel when you made good choices? How did you know?

7. Does meeting with us help you? Why?

8. How do you think the times we saw each other helped the other boys you come in with? Why?

9. What do you think helped them the most? Why?

10. What did you like the most? Why?

11. How did meeting with us in the morning affect your relationship with them? Describe how you were friends with them before we started meeting and now.

12. If you could change something about the intervention times what would you change? Why?

13. What would you keep exactly the same? Why?

14. What did you think of the social story video? Why?

15. Is there anything else you want to share?

APPENDIX H

VIGNETTE INTERVIEW

Vignette #1

A third grade boy named Andrew is sitting in Ms. Malcott's classroom while she is starting a lesson on synonyms. Ms. Malcott went over the expectations before the lesson and she said it was important to show respect to her and to others by keeping your eyes on the speaker and raising your hand when you have a need or a question. She also said it is important to not play with things at our desks because that may distract us from learning. He looks around and sees other students starting to talk to each other and he also notices he has some markers and paper clips in his desk and pieces of scrap paper. The students begin to whisper loudly to each other and no one is raising their hand to talk. Another student is asking Andrew what the answer is. Andrew thinks he knows the answer, what should he do?

Vignette #2

Ms. Malcotte just gave a lesson on antonyms and after modeling how to play an antonym game with the students, she has now grouped students so they can play in small groups. Andrew, one of her students, was placed with some students who, he said, annoy him. These students won't let him go first and they are not listening to him. He is thinking of just yelling at them so they can listen because he is getting mad. What should Andrew do?

Vignette #3

Ms. Malcotte, a teacher, just gave the expectations for her class saying there was to be absolutely no talking while the students were taking a test. Just then a student asked Andrew if she could see Andrew's new pencil. Andrew was in the middle of telling her no when Ms. Malcotte came to Andrew and asked him quietly to choose step for talking

when she had told the class the expectations. Andrew started to get upset because it was so unfair that she asked him to choose step and not the other student. She turned away and began to walk away. He felt tears start to come out and he started to breathe fast. He even felt like yelling so she can listen to his side of the story. Maybe if he yells no out loud she will finally listen to him and know it wasn't his fault. What should Andrew do?