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**Exploring the Effects of Video Self-Modeling as an Intervention for
Social Interactions in Young Children with Disabilities**

by

Katherine A. Ewens

A Starred Paper

Submitted to the Graduate Faculty of

St. Cloud State University

In Partial Fulfillment of the Requirements

For the Degree

Master of Science in

Child and Family Studies

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Starred Paper Committee:
Jane Minnema, Chairperson
Shannon Rader
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Dedication

This thesis is dedicated to my husband and my parents
for their endless love, support and encouragement.

Acknowledgements

First and foremost, I want to thank my husband for his endless understanding, support, and love. Thank you for giving me strength and encouraging me to reach my goals. Thank you for the countless hours spent listening and discussing my research study.

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I would like to thank my Guardian Angels in Heaven for never being too far, and for always shining down on me. I know you are always with me.

This thesis is only the beginning of my journey.

Abstract

Video Self-Modeling (VSM) provides learning opportunities for young children with disabilities through technology by watching a 3-minute video clip of himself/herself successfully performing a desired behavior. In this study, a single case multiple-baseline design was used to determine the effectiveness of VSM in increasing social interactions specifically in the area of cooperative play in three young children ages 4 years old and 5 years old. The participants in the study receive Special Education Services under the Autism Spectrum Disorders (ASD), and Developmental and Cognitively Delayed (DCD) educational categorical labels and participate in a center-based classroom with non-typical peers. VSM enhanced overall play skills, appropriate play, and engagement in play activities. The relationship between educational labels and VSM effectiveness is discussed along with other factors that may influence VSM outcomes with young children with a variety of disabilities.

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Chapter 1: Introduction

Overview

Video self-modeling is gaining respect as an intervention option for individuals with Autism Spectrum Disorders and developmental disabilities in addressing communication, behavioral functioning, and social skills. In recent literature, Buggey and Ogle (2012) defined video self-modeling as watching and learning from one's own behavior. Video self-modeling seems to be a relatively new intervention strategy for teaching students with a variety of educational needs. Yet, video self-modeling first appeared in the literature in the early 1970s (Bandura, 1976; Creer & Miklich, 1970).

Video modeling made an appearance in the 1950s supporting a variety of different behavioral theories (Bandura, 1969; Skinner, 1953). Video modeling (VM) is described as a technique that involves demonstration of desired behaviors through active video representation of the behavior demonstrated by another person (Bellini, Akullian, & Hopf, 2007). Skinner's (1953) operant behavior theory reinforced the concept of modeling to discriminate between behaviors with positive or negative consequences. Bandura (1969) exemplified the social learning theory and provided one of the theoretical bases for video self-modeling. Observing and modeling behaviors, emotional reactions of others, and attitudes were emphasized in Bandura (1969). Bandura focused in 1969 on neurotypical individuals and individuals with psychological disorders using the behavior modification framework. Thus, the basic elements of today's video self-modeling can be traced back to the early work of the theorists, Skinner (1956) and Bandura (1969).

To extend this line of historical thinking, Creer and Miklich (1970) first introduced the term, “self-modeling,” and conducted the first self-modeling study in an educational setting. Further, Bandura advocated for the use of film as a teaching tool in 1976 to teach children social behavior when watching themselves acting appropriately. Watching and learning from one’s own behavior on film first appeared in education literature as early as 1976. In current special education practice, video self-modeling is defined as watching and learning from one’s own behavior through the use of observation on film.

Video self-modeling (VSM) is described as a strategy to teach a designated skill through the use of technology by videotaping the student demonstrating the designated skill with adult and peer prompting as needed. Following the gathered raw footage video, the video is edited to a 2- to 3-minute video clips. Dowrick and Raeburn (1995) stated that the optimum length of video self-modeling clips is 2 minutes and 30 seconds with times greater than this not producing any differences in effect. Video footage is recorded of the participant doing the expected skills appropriately with physical and verbal prompting as needed. For example, if a student needs to improve their social skills by greeting peers, the video footage would record the student greeting peers with adult physical prompt (taking the students hand and waving) paired with an adult verbal prompt (telling the student to say, “hi”). The videotape is then edited to demonstrate only the designated completed skill performed correctly. In the example of the student greeting peers, the video clip would demonstrate the student greeting peers independently, because the physical and verbal prompts were removed from the video. After the editing is complete, the student views the videotape as part of the intervention phase to observe the target behavior performed independently. Video self-modeling is an older intervention as reported in less current literature,

but is currently growing in use probably due to the increased use of technology in educational settings.

Importance of the Study

Video instruction has continued to evolve as an intervention strategy for individuals with disabilities since the early 1970s. The intervention of video instruction is increasing in practice with the increasing use and availability of technology, latest research on positive intervention strategies, and brain functionality for individuals with Autism Spectrum Disorders (ASD). During social interactions, individuals with Asperger's Syndrome (AS) or High Functioning Autism (HFA) often experience difficulties with initiating and responding, interpreting nonverbal cues, initiating and maintaining eye contact, exhibiting appropriate emotional reactions, and using nonverbal behaviors as maintenance techniques (American Psychiatric Association, 2006; Atwood, 2000; Weiss & Harris, 2001). ASD involves deficits in social reciprocity, language, and communication, as well as repetitive behaviors and/or stereotyped interests (American Psychiatric Association, 2006; Eigsti & Shapiro, 2003). Individuals with ASD have varying strengths and weaknesses that are exhibited on a wide spectrum of abilities. For instance, some individuals with ASD have significantly low cognitive abilities while other individuals with ASD may have extremely high cognitive abilities.

Research has shown that individuals with ASD are visual learners. Grandin (1996) described her own life with ASD as, "thinking in pictures." Zihni and Zihni (1998) believed that television offers a relatively nonthreatening medium of teaching when compared to direct human interaction. Professionals are more and more understanding the educational needs of individuals with ASD and the effective interventions to meet those needs. In doing so, it is suggested that

professionals use those interventions that present information processing approaches developed specifically for a brain that has ASD.

Statement of the Problem

Rayner, Denholm, and Sigafoos (2009) discussed the strength of individuals with autism processing visual stimuli. Kanner (1943) noted that the children he observed “seemed to maintain a far better relationship with pictures of people than actual people themselves” (p. 250). More recently, Grandin (1996) described her own life with autism wrote: “I think in pictures. Words are like a second language to me. I translate both spoken and written words into full-color movies, complete with sound, which run like a VCR tape in my head. When somebody speaks to me, his words are instantly translated to pictures” (p. 1).

From the literature, individuals with ASD are visual learners, and process information through visual stimuli. Grandin (1996) promoted the use of visual support by stating, “Spatial words such as over and under had no meaning for me until I had a visual image to fix them in my memory” (p. 30). Janzen (1996) emphasized the importance of providing visual support that is essential so that the student with autism can process the whole message. Professionals are increasing understanding of the importance and effectiveness of visual stimuli, and are increasing visual support for individuals with ASD in education. Currently, we have limited evidence that demonstrates the best outcomes for young children with ASD when using video self-modeling interventions.

Purpose and Research Question

The purpose of my study was to explore video self-modeling in increasing social interactions of 4- and 5-year-old children with disabilities in an Early Childhood Special

Education classroom setting. The research question for this research study is: How does video self-modeling affect the play development of social interactions of 4- and 5-year-old children with disabilities in an Early Childhood Special Education classroom setting?

Conclusions

Chapter 1 contains information regarding video self-modeling as an older intervention, dating to the early 1970s and earlier in Skinner and Bandura's behavioral theories addressing the importance of modeling appropriate social behavior. Video self-modeling is defined as watching and learning from one's own behavior, and a strategy to teach a designated skill through the use of technology by videotaping the student demonstrating the designated skill with adult and peer prompting as needed. Then, the video raw footage is edited into a 2- to 3-minute video clip. Because research has shown that individuals with ASD "think in pictures" and are visual learners, video self-modeling is currently catching on in educational practice. Considering the increased use of technology in education in general with the more specific research on brains of individuals with ASD, it is therefore logical to consider video self-modeling as a successful intervention for individuals with ASD. The purpose of this research project was to explore these possibilities for young children with ASD so that professionals can match interventions with the research-based findings demonstrating how a brain that has developed ASD processes information.

In the next chapter, I review the literature pertaining to the use of video self-modeling in social interactions of young children with disabilities, and the age group in which video self-modeling is most effective. I also discuss the benefits and limitations of using video self-modeling as an intervention for young children with disabilities.

Chapter 2: Literature Review

Overview

From the literature, video self-modeling is an older intervention but is currently catching on in practice, most likely because of the increased use of technology. Studies conducted using VSM have been conducted for a variety of ages and disabilities. Many of the studies demonstrated positive results from the use of video self-modeling for children with a variety of ages and disabilities (Bellini et al., 2007; Buggey, 2005; Buggey, Hoomes, Sherberger, & William, 2011; Creer & Miklich, 1970; Woltersdorf, 1992).

A few studies found limited effectiveness with the intervention of video self-modeling (McCurdy & Shapiro, 1998). Some studies involving preschoolers with autism (Buggey, 2011) found no changes in behavior with VSM. Research has demonstrated the younger the child is, the less effective video self-modeling is, especially if the child is under the age of 3 years old (Buggey, 2012; Buggey & Ogle, 2013). Some studies compared the intervention differences of watching yourself demonstrating the designated behavior with the use of video self-modeling and watching someone else demonstrate the designated behavior with the use of video modeling (VM) (McCurdy & Shapiro, 1998; Scherer, Pardes, Kiaskacky, Ingersoll, & Schreibman 2001). The following literature review addresses the variety of studies exploring the effects of video self-modeling in young children with disabilities.

Successful VSM Studies

Creer and Miklich (1970) were the first to conduct a research study using video self-modeling in an educational setting. A 10-year-old boy who exhibited negative behaviors and was considered aggressive was the only participant in the case study. The goal of the study was

to reduce the student's negative behaviors. Videotaping of the student included the student completing both positive age-appropriate behavior and negative behavior. The raw video footage was separated and edited into two different videotapes, one positive behavior videotape, and one negative behavior videotape. Intervention included the student watching the video demonstrating positive behavior for 5 minutes per day for 2 weeks. The results indicated an increase in positive behavior. Researchers then showed the student the video demonstrating negative behavior for 5 minutes per day for 2 weeks, and the student decreased positive behaviors and increased negative behaviors back to the student's baseline level of negative behaviors. Then, the student was shown the previous positive behavior video and the student increased his positive behaviors, maintaining an increase in positive behaviors for more than 6 months.

Buggey (2005) conducted a study with two second-grade students with mild autism. The students in the study had similarities in their trigger behaviors as analyzed by a functional behavioral analysis. During baseline data collection, both of the students in the study exhibited between 20 to 30 minutes of tantrums each school day. To get the most accurate video footage, the two students role-played and used self-talk in their videos. For example, a trigger behavior for both of the students was not being called on when the teacher asked a question when their hand was raised to answer the question. A scenario was used in the VSM video involving the teacher asking a question, and the student raising their hand and not being asked to answer the question. In the VSM video, when the student does not get called on to answer the question, the student looks at the video camera and uses self-talk, "It's alright, I'll get a turn later." After the intervention phase, both of the students went from having 20-30 minutes of daily tantrums to

almost zero. Some small behaviors were noted, including crossing their arms and slumping down in their seats only lasting a few seconds when they did not get called on by the teacher when the class was asked a question. Results of the study indicate the students' dramatic results using video self-modeling. The researchers believed the students began to self-monitor their own behavior.

Bellini et al., (2007) explored the effectiveness of video self-modeling as an effective intervention to increase social engagement in children 4 and 5 years old diagnosed with ASD. The study included the use of video self-modeling to increase unprompted social interactions with two students diagnosed with ASD with same-aged peers in their natural classroom setting. Psychological reports and educational assessments were conducted to ensure the students participating in the study met qualifying scores for autism spectrum disorders in both clinical and educational settings. In the intervention phase of the study, both participants watched one 2-minute video clip uninterrupted in a designated location upon arrival into the classroom each day to promote consistency. The teachers administering the video did not engage with the students, unless the students demonstrated off-task behavior and needed redirection to attend to the video. Both students watched one video clip per day, alternating the video clips daily for four school weeks. After the video was administered, the students engaged in free play for 30 minutes without teacher engagement. Data were collected by observing the social engagement of the participants with same aged peers during a "free play" activity. Results of this study demonstrated an increase in social engagement of children ages 4 and 5 years old diagnosed with ASD.

Buggey et al. (2011) explored the use of video self-modeling with 3- and 4-year-old children, only one child whom was 3 years old. Children chosen to participate in the study have ASD and all of the participants have not made progress with other intervention methods (social stories and a buddy system) in increasing social initiations. Raw video footage was taken on the playground with a few peers typically interacting with the students with ASD with adult prompting. The VSM video focused on verbal and physical social initiations. Verbal prompts were given to the students to imitate social phrases such as “play with me” and “chase me” throughout the intervention. The 4-year-old children in the study made immediate social gains, maintaining for several months. No social gains were made by the 3-year-old child.

Woltersdorf (1992) conducted a study with a 6-year-old boy diagnosed with attention-deficit hyperactivity disorder (ADHD) displaying disruptive and noncompliant behaviors. The student was videotaped and the raw footage video was edited to include only positive examples of behavior for the student. Results of the study indicated an increase in positive behavior for the student with the intervention of VSM. Woltersdorf (1992) expanded on the previous study by exploring the effectiveness of VSM with 9-year-old to 10-year-old boys with a diagnosis of ADHD. The participants in the study included four boys ages 9 years old to 10 years old, all exhibiting the following behaviors: vocalization, fidgeting, and distractibility. All four of the participants decreased their vocalization, fidgeting, and distraction behaviors. Some research studies indicated some increase in positive behaviors but also demonstrated video self-modeling may not be an effective treatment for everyone (McCurdy & Shapiro, 1998).

Limited VSM Study Success

Some studies involving children ages 3 years old and younger (Buggey, 2012; Buggey & Ogle, 2013) found no changes in behavior with the intervention of video self-modeling. Three students aged 3 years old diagnosed with ASD and who attended a private inclusive preschool participated in the Buggey (2012) research study. Each participant in the study viewed their specific 2- to 3-minute video clip upon arrival to school for eight consecutive sessions. Approximately 1 hour into the school day, the class went to the playground. At this time, the observers documented the students' social initiations with same-aged peers by observation. During the intervention phase, the observation period occurred during playground time for 15 minutes each school day. The same phases of the study were repeated in the follow-up stage the subsequent fall, the children's ages were older in the follow-up study and they were in different classroom environments, but the other elements of the study remained the same. Results in the Buggey (2012) study concluded none of the three students in the study appeared to make gains in initiating social interactions. Only one student exhibited a change in frequency of initiation; the frequency of initiation more than doubled between the baseline and intervention phase. The researchers noted the change in his frequency of social initiations was such a variation in his rate that it was unlikely to be increased by the intervention of video self-modeling.

In most of the research conducted exploring the use of VSM and social interactions, the participants have been students with a variety of disabilities. Buggey and Ogle (2013) explored the use of VSM with typically developing 2- and 3-year-old children when they are shown videos of themselves interacting appropriately to increase their social interactions with children with ASD in free-play settings. Six students were selected for the study, two students with ASD

and four typically developing students' ages 2 years old to 3 years old. The four typically developing students were videotaped socially interacting with the students with ASD; interactions included initiation, parallel play, and engaged play. Data were collected by observation for 15 minutes during center time and playground time daily. Results in the study indicated the two students with ASD and the four typically developing children did not increase their frequency in social initiation during the study.

Buggey (2011) explored the difference in effectiveness of video self-modeling with 3-year-old children versus 4-year-old children. Research to this point has demonstrated some effectiveness of VSM with 4-year-old children; however, research has demonstrated VSM as an ineffective intervention for children 3 years old and younger. Similar to the Buggey et al. (2011) study, Buggey (2011) replicated the same study with the only difference being the children were between the ages of 3 years old and 4 years old. The results of the study indicated no behavior changes of any of the participants. Buggey (2011) noted that the lack of results may have indicated the participants' social initiation skills rather than the age of the participant.

Comparing VM and VSM

Scherer et al. (2001) compared the effectiveness of video self-modeling versus video modeling. The goal of this particular study was to teach five children with ASD conversation skills. The VM and VSM footage was depicted by engaging in a conversation. Out of the five participants, one participant improved after watching the video self-modeling video and one participant improved after watching the video modeling video. The other three children in the study demonstrated no differences between VM and VSM.

McCurdy and Shapiro (1998) explored the use of VSM along with other methods. The study focused on five students with a mean age of 9 years and 11 months old. Intervention phase of the study included VSM along with a school-wide reward system. The goal of the study was to reduce disruptive behavior with students with social and emotional disturbances. This study compared the effectiveness of VSM and VM. All five of the students participating in the study were shown VSM videos of themselves demonstrating appropriate behavior and four out of the five students were shown video modeling (VM) of appropriate behavior demonstrated by a 12-year-old student. The results of the study indicated a range of effectiveness. Out of the five students, two students' behavior did not improve with the intervention of video self-modeling. Of the children that were shown both video self-modeling and video modeling, two out of the four students reduced their disruptive behavior when watching both of the videos. The same two students made more of an improvement watching the VSM videos. Results of the study indicated some effectiveness with the intervention of VSM, but it may not be effective for all students.

Conclusions

Chapter 2 reviewed research studies using the intervention of video modeling and video self-modeling for children with a variety of ages and disabilities. Many of the studies concluded positive results using video self-modeling (Bellini et al., 2007; Buggey, 2005; Buggey et al., 2011; Creer & Miklich, 1970; Woltersdorf, 1992). The only age group where positive results were not found was with the preschool age group; specifically, ages 3 years old and younger (Buggey, 2012; Buggey & Ogle, 2013). A few studies found limited effectiveness with the intervention of video self-modeling (McCurdy & Shapiro, 1998). Some studies compared the

intervention differences between VSM and VM (McCurdy & Shapiro, 1998; Scherer et al., 2001).

Research has demonstrated the younger the child is, the less effective video self-modeling is, especially if the child is under the age of 3 years old. Buggey's (2011) study involving preschool children with autism found no changes in behavior using video self-modeling.

In the next chapter, I review the purpose of my study to explore the use of video self-modeling in increasing social interactions of 4- and 5-year-old children with disabilities in an Early Childhood Special Education classroom setting. I discuss the research design, participants, setting, data collection strategies, study procedures, and data analysis.

Chapter 3: Method

Opening

To promote young children with disabilities development in the area of social development, children need to be encouraged to participate in cooperative play activities and be instructed on how to play appropriately with peers when needed. A relatively new way to support the social emotional development of young children with disabilities is intervening with video self-modeling. Considering the research conducted to this point in time, we know very little about the use of video self-modeling fostering social interactions among same-age peer groups of students with disabilities. The purpose of my study was to explore the use of video self-modeling in increasing social interactions of 4- and 5-year-old children with disabilities in an Early Childhood Special Education classroom setting.

Research Design

This research study employs a single case design using a multiple baseline approach by collecting data through a structured observation schedule. A case study research design is appropriate in the current study because there is limited research completed thus far, so an exploratory study best addresses the research question posed for this study. Next, because there is low incidence of delayed social interactions skills in the overall student population, looking individually at students in this study is again appropriate. Finally, it is not feasible to create a random sample for this particular study in the school setting where data are to be collected.

Research Question

The research question for this present study is as follows: “How does video self-modeling affect the play development of social interactions of four and five year old children with disabilities in an Early Childhood Special Education classroom setting?”

Participants and Setting

All of the students involved in the study have difficulty interacting socially with same aged peers. The participants attend a multi-categorical preschool classroom either 3 or 4 days a week (depending on their age, 3-year-olds come 3 days a week, 4-year-olds attend 4 days a week) for 2 hours and 30 minutes each session in a public school district. In a multi-categorical classroom, all students in the classroom receive Special Education Services through an Individual Education Plan (IEP). All of the students in this classroom (including the study participants and peers) have a variety of disabilities and receive Special Education Services under a specific educational label of either Developmental Delay (DD) or Autism Spectrum Disorders (ASD). According to the Minnesota Department of Education (2015), in Early Childhood Special Education in the state of Minnesota, educational labels are categories in which the student demonstrates an educational need in certain areas of development and receives specific Special Education Services to meet those individual needs. For students over the age of 3 years old, in order to receive Special Education Services under the educational label of Developmental Delay (DD), the student demonstrates a deficit of at least 1.5 standard deviations below the mean of same-aged peers on a state-recommended standardized test. Deficits must be demonstrated in at least two developmental learning domains (cognitive, social/emotional/behavioral, fine motor, gross motor, adaptive, and communication). To receive

Special Education Services under the category of ASD, students must show a deficit in social reciprocity, language, and communication, as well as repetitive behaviors and/or stereotyped interests. In summary, the participants in the study are 4-year-old and 5-year-old children with a variety of disabilities.

Due to the behavioral needs of the students in this classroom setting, there are seven total students in the morning class, and seven total students in the afternoon class. The number of students in the class each day is different depending on the day of the week because 4-year-old students attend 4 days per week (Tuesday-Friday) and 3-year-old students attend 3 days per week (Wednesday-Friday). In the classroom, there is an Early Childhood Special Education Teacher, one consistent paraprofessional educator, two paraprofessional educators that are with the class 1 to 4 days a week, and one Speech and Language Pathologist in the classroom 1 full day each week. On a weekly basis, these classroom staff's schedules remain the same even though the staff composition changes on a daily basis. Itinerant staff including an Occupational Therapist, Behavior Specialist, Autism Resource Specialist, and Physical Therapist also provide services in the classroom as needed. Out of the seven total students in the morning class, one student was chosen to participate in the study. Out of the seven total students in the afternoon class, two students were chosen to participate in the study.

All of the students in the class engage in play activities at different developmental levels of play, which include onlooker play, solitary play, parallel play, associative play, and cooperative play. Lounsbury and Bell (1976) described the various levels of play as: 1) Solitary play is children playing alone without overt reaction to other children who are playing nearby;

2) Parallel play is children playing using the same materials or toys but they do not play with each other; 3) Associative play is children sharing materials and talking to each other but not coordinating play objects or interests; and 4) Cooperative play is two or more children interacting in a common play venture.

I chose the participants in the study to explore the use of VSM affecting social interactions specifically in the area of cooperative play with varied disabilities in an early childhood special education preschool classroom. Specifically, participant selection included special education documentation of significantly delayed social skills, meaning that the participants are behind the other students in the class in the area of social development. Also, the participants will need cooperative play skills for their next educational placement. I decided to focus on the area of cooperative play, because all of the participants are not consistently engaging in cooperative play as documented in daily classroom record keeping. The participants need to improve their cooperative play skills by working together to achieve the same end result (playing cooperative games, building a tower, creating a Mr. Potato Head, or completing a shape puzzle). All of these participants are receiving Special Education Services under different educational labels. I chose children with different educational labels to explore the effects of video self-modeling among children with different disabilities.

Beyond the criteria used to select the participants for this study, each participant with disabilities can be described at individual levels to provide additional context for data interpretation. The participants' names in the study have been changed to protect their family confidentiality.

Participant 1. Amy is a 4-year-old child receiving Special Education Services under the categorical label Developmental and Cognitively Delayed (DCD) mild to moderate with an Intelligence Quotient (IQ) of 55. In education, DCD is an individual displaying significant delays in overall development and an Intelligence Quotient (IQ) score of 70 or less derived from a standardized IQ test. Amy has limited language, but does babble and use a few words consistently and appropriately (more, ball, all done, hi, bye). She says “momma” to gain adult attention in the classroom as well as using an isolated finger point for requesting her wants and needs. Amy is beginning to spontaneously verbalize one word phrases specifically to label items and objects (ball, bubble, shoe, baby, colors, and animals). Even though inconsistent, Amy is beginning to respond to yes and no questions. Cooperative play, sharing materials with peers, and peers being near her when she is playing with a preferred toy are difficult for Amy. She tends to display aggression toward peers by hitting, pushing, biting, pinching, and pulling hair to defend her possessions when a peer is in her personal space. Amy turned 4 years old before September 1, 2015, therefore, she attends school four sessions a week (Tuesday-Friday) in the morning class for 2 hours and 30 minutes each session. Amy engages in parallel play, but does not consistently engage in cooperative play with peers, meaning she has limited social interaction and engagement with her peers.

Participant 2. Cal is receiving Special Education Services under the educational label of Autism Spectrum Disorder (ASD). Cal is a 4-year-old child and an English Language Learner (ELL). Burmese is the primary language spoken in Cal’s home; both of his parents speak Burmese, Chinese, and English. Cal’s parents speak mostly Burmese at home, and they speak Chinese to one another. Outside of the home, Cal’s parents speak English, Burmese and Chinese

depending on the social situation. Cal is verbal and he uses scripts when communicating, for example, when he greets others he says, "Say Hi Kate," he always uses the sentence from the Picture Exchange Communication System (PECS), "I want __ please" to get his wants and needs met. Cal has difficulty gaining attention before making a request, therefore, he uses PECS to request food items at snack time. Cal turned 4 years old before September 1, 2015, therefore, he attends school four sessions a week (Tuesday-Friday) in the afternoon class for 2 hours and 30 minutes each session. Cal engages in parallel play, but does not consistently engage in cooperative play with peers, meaning that he has limited social interaction and engagement with his peers.

Participant 3. Lee is receiving Special Education Services under the educational label of Autism Spectrum Disorder (ASD). Lee uses PECS to get his wants and needs met by gaining attention at snack time. He participates in parallel play and can become easily possessive over specific preferred items during playtime. For example, if there are cars in the play area, he will collect all of the cars and will demonstrate distress and become aggressive if someone else has one car. Lee just turned 4 years old in January, 2016. Lee turned 3 years old before September 1, 2015, therefore, he attends school three sessions a week (Wednesday-Friday) in the afternoon class for 2 hours and 30 minutes each session. Lee is in the same class as Cal, attending Wednesday- Friday afternoons. Lee engages in parallel play, but does not consistently engage in cooperative play with peers meaning that he has limited social interaction and engagement with his peers.

Procedures

Participation consent. The participants in the study were carefully chosen and the participants' parents will be provided with information of the study using an interpreter when needed. Parents of the participants will be given an informational consent form to sign, date, and return if they agree to have their child participate in the study (Appendix D). The study will not begin until the consent forms are explained to parents, signed, and returned.

Non participation consent. The non-participant students in the class may be inadvertently videotaped throughout the length of the study; therefore, the parents of the non-participants students in the class (the remaining students) will receive an informational letter explaining the study and that their child may be inadvertently videotaped. If the non-participant students' parents agree, they must sign, date, and return the consent form (Appendix E). If the non-participants parents do not agree to possibly having their child inadvertently videotaped during the study, they do not return the form. The non-participant consent forms that are not returned, I will ensure the student will not be in the videotaping area throughout the length of the study.

Editing the video. Raw video footage will be taken using the school district Apple© iPad© and edited on the school district Apple© MacBook© laptop using the built-in iMovie© software program. The iMovie© program allows for cropping film clips, removing adult prompting, and the ability to zoom in on the children in the video. Other features in the production of the video self-modeling videos are titles, transitions between clips, and audio insertions, including clapping, music, and voice-overs. Sound effects and ambient music also come with the iMovie© software.

Intervention part 1. In order to explore the effects on young children's social interactions using video self-modeling, the participants will be videotaped when participating in cooperative play activities with peers appropriately with adult prompting and support as needed. Raw video footage will be recorded demonstrating the participants participating in four cooperative play activities in the play area of the classroom. Lee and Cal are in the same afternoon class; therefore, they will be video recorded participating together in the video self-modeling video. A second video self-modeling video will be recorded of Amy participating in the play activities with a peer in her class. The activities include building a tower with Legos®, completing a simple shape puzzle, creating a Mr. Potato Head®, and building a tower with blocks. After the raw videotaped footage is collected, I will review the videotape and edit the video clip to ensure only appropriate social interactions are included. Any verbal and physical adult prompting throughout the 2- to 3-minute video clip will be removed. The video clip will be available the next school day to begin the intervention phase.

Intervention part 2. During the intervention phase, the participants will view the video every day upon arrival to school each school session for a total of 2 school weeks. All four of the cooperative play activities will be incorporated into one video clip with a transition using iMovie® between each play activity. To encourage the participant in watching the video clip, the researcher will tell the participant, "Time for special video" and will have a visual representing the "special video" for the participant. (See Appendix C for a copy of this visual cue.) The video watching will take place consistently in a designated quiet area of the classroom that is free from distractions. While the participant is viewing the video, staff members will be directed not to engage with the participant as well as supporting peers in not interrupting the

video viewing. Throughout the length of the study, the cooperative play materials (Legos©, blocks, Mr. Potato Head©, and the shape puzzle) will be consistently available daily during free play for all of the participants. The participants will be reinforced with verbal (good playing with _) and physical praise (high-fives) when sustaining engagement in cooperative play activities.

Intervention schedule. Since this study is a single case design, I shall implement an AB multiple baseline approach (A-baseline phase, B-intervention phase). The baseline of the participants are initiated at staggered times. Amy, Participant 1, begins the intervention phase first because of her significant cognitive delays, she will need more repetition of the skill, and she demonstrates less cooperative play skills than Cal, Participant 2, and Lee, Participant 3. Amy's baseline data will be collected first for three school sessions with the 2-week intervention phase immediately following. Then, during Amy's first week of intervention, baseline data will be collected for Cam and Lee. Immediately following Cal and Lee's baseline data collection phase, the intervention phase of the study will begin. A table is created to visually describe when each phase of the study will be introduced (Appendix B).

Intervention behavior management. The students attending a multi-categorical classroom typically have difficulty complying with adult directives and transitioning between activities. Before the participants view the video, multiple strategies will be used to ensure the participant knows that the activity they are involved in will be ending and that it is almost time to watch their special video. The visual and verbal warnings will assist in reducing refusal behavior and to ensure a smooth transition. Visual and verbal warnings (visual picture schedule, duration map, first_ then_ visual, verbal first_ then_, a verbal warning, visual timer, and the use of, "All

done when I count to 3”) will be used to ensure the participant knows when the previous activity is ending (see Appendix C for visual models of warning materials). If the student is demonstrating refusal behaviors watching the video (refusal to come to the designated table, looking away from the video, talking), visuals (visual schedule, first_, then_, and duration map), and motivators (preferred items) will be used to keep the student on task. Verbal and physical redirection prompting will be used if needed to keep the participant engaged in the video (pointing to the video). If the participant demonstrates refusal behaviors and difficulty transitioning to watch the “special video,” it will be documented on the data collection form. The amount of difficulty ending the previous activity, transitioning to watch the “special video,” and attending to their specific “special video” will be documented. If the student has difficulty ending the previous activity, transitioning to watch the special video, and attending to the special video, it will be documented and the data will be analyzed for a pattern comparing the difficulty with transitioning to the video and cooperative play skills for the specific day.

Data Collection Strategies

Baseline data are collected by video recording and coded by the researcher using the data observation form. The data collection form will be piloted before the study begins to ensure the data will be correctly documented. Baseline data are collected by video recording for 15 minutes during the beginning of playtime for three consecutive school sessions. The data observation form includes the four cooperative play activities (Mr. Potato Head©, shape puzzle, Legos©, and blocks) also listed is a column for other play activities, meaning any other activity available in the play area. In the data observation form, there are six columns describing the level of play and engagement (not engaged, looking at activity, playing alone with activity, parallel play

sharing materials, allowing a peer to join in activity, and joining a peer in activity).

Documentation of cooperative play engagement includes allowing a peer to join in an activity and joining a peer in an activity on the data collection form. Data are collected at the beginning of every 30-second interval by documenting with a tally mark in the appropriate box based on the participants' level of engagement in the activity and the activity they are interacting with per 15-minute play observation.

After baseline data are collected, the intervention phase of the study will begin. During the intervention phase, data are collected by observation protocol. Data collection are performed during the first 15 minutes of playtime daily by observing the participant's social interactions, specifically in the area of cooperative play. The students have 15 minutes at the beginning of playtime to engage in the toys and activities of their choice. I will observe the participants engaging in cooperative play with the designated materials in the play area. A digital timer will be used and data will be taken in 30-second intervals. Data collection will be conducted observing the activity the participant is engaged in and the level of play by placing a tally mark in the appropriate box.

Data Analysis

Once Intervention Part 1 and Part 2 are completed, I will observe and code the videotaped footage, and observation during playtime following the observation protocol coding form (Appendix A) to determine how video self-modeling affects the participants' social interactions in cooperative play activities. As a visual representation, I will graph the participation frequency (per 30-second intervals during the 15-minute observation period) in cooperative play activities the participants participated in (allowing a peer to join in activity, and joining a peer in activity)

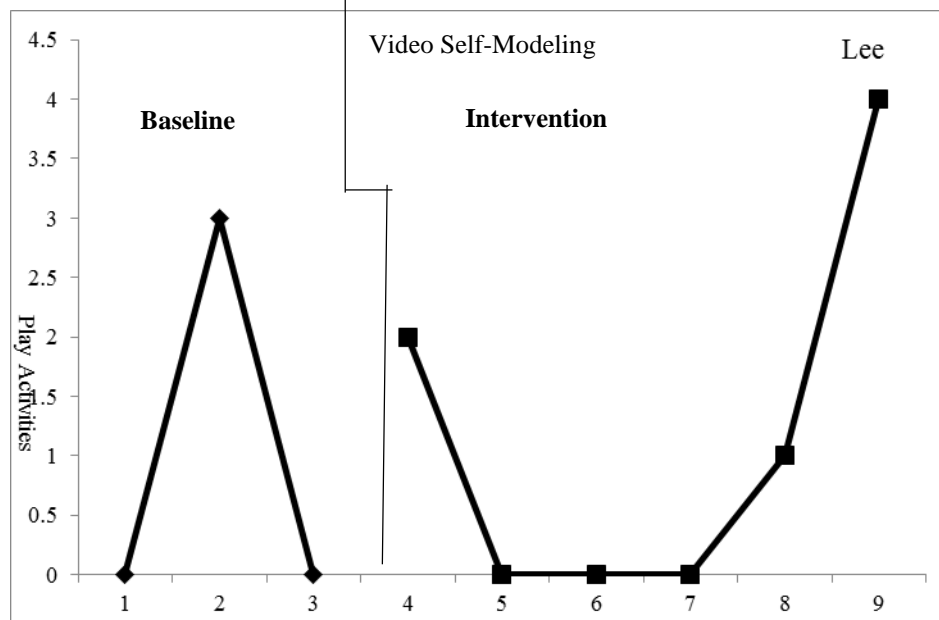
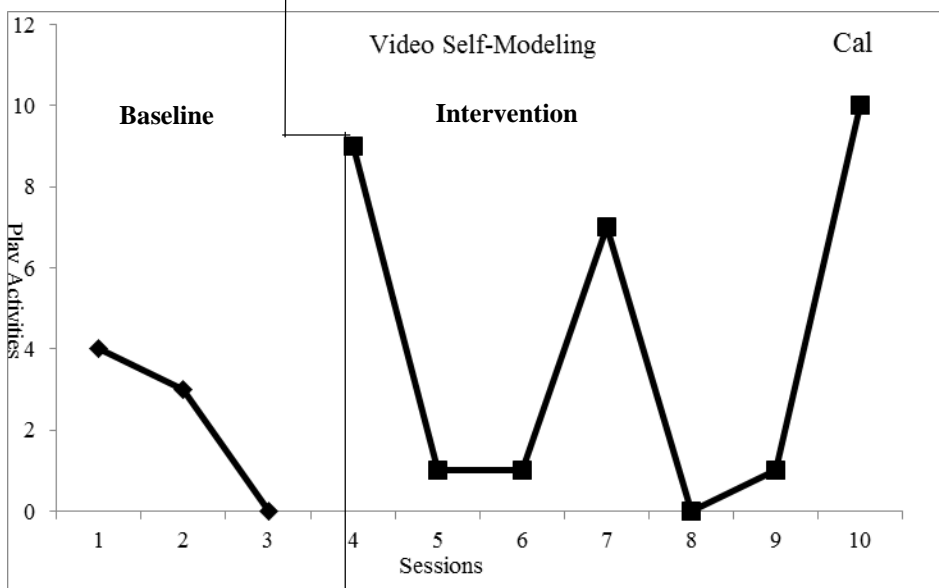
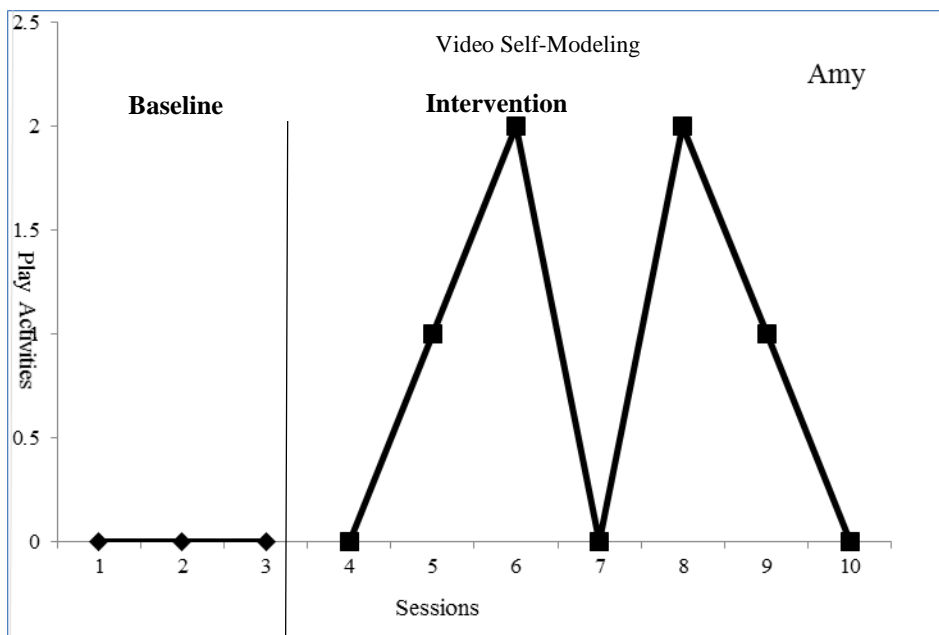
on each school day. The cooperative play frequency mean will compare baseline data to intervention data will be analyzed and discussed.

Upon study completion, a reliability check will be completed with a colleague specializing in Early Childhood Special Education and also teaching a multi-categorical classroom. During the reliability check, we will discuss the different levels of play previously described and depicted on the data collection form. Then, she will view the Baseline Data videos during playtime and code the videos using the data collection form. After the completion of viewing and coding the videos, we will discuss the similarities and differences in the coding of the videos.

Chapter 4: Results

Overview

The results of the study indicated positive results from the use of video self-modeling as an intervention to increase cooperative play skills, yet the pattern in the data is variable for all three participants. The data collection form was piloted before the study began to ensure the data was correctly documented. All of the participants enjoyed watching the video and needed minimal prompting to transition to the video and to attend to the viewing of the video. The following information is gathered by observation, and anecdotal note-taking documented throughout the school day by a trained teacher. The study results are demonstrated in a visual representation on the next page and are discussed in the following chapter.



Participant 1 (Amy) Results

Amy transitioned when told it was time to watch “special video.” She demonstrated enjoyment when watching the video self-modeling video of herself participating in cooperative play activities and she would cheer for herself each time the cooperative play activity successfully ended. On several occasions, Amy requested to view the video again by saying, “more” when the video ended. I ensured Amy only watched the video one time each school day to continue consistency with the other two participants. Amy attended to the video with some prompting needed. She would periodically try to show staff members her video, and would try to engage staff members to watch the video with her. Amy responded to nonverbal redirection with a finger point toward the computer to encourage her to continue to watch the video. On the last day of Amy’s intervention, the power went out at our school, and our schedule was different due to no power. Amy watched the video upon arriving to school; shortly after Amy’s viewing of the video, we lost power in our school. Our daily school schedule was different because we were not able to go to the gym, and playtime was earlier than on typical days.

Video self-modeling as an intervention increased Amy’s overall cooperative play skills, yet the pattern represented in the graph is variable. Amy’s mean participation in cooperative play activities during baseline was zero times in a 15-minute observation ($M= 0$). During the intervention phase, the cooperative play activity participation mean was .86 times participating in cooperative play activities in a 15-minute observation ($M= .86$). It is difficult to determine if the increase in play skills is connected to the use of video self-modeling because the pattern in the data is variable and is discussed in the next chapter.

According to the recorded observations, Amy's overall engagement in activities increased throughout the length of the study demonstrated by intervals where she was engaged with an activity by looking at an activity or playing with a toy. During baseline data collection, Amy was not engaged with any activity an average of 11 times per 15-minute observation ($M= 11$). During baseline unstructured playtime, Amy wandered around the play area and smiled at the adults in the classroom to try to get the adults to engage and play with her. When Amy was engaged with toys during baseline playtime, she demonstrated restricted play patterns by playing with the same toys in the same way (for example, she would find all of the Lego[©] people and line them up on the top of the vent) putting the Mr. Potato Head[©] pieces in the back compartment of Mr. Potato Head[©] or she would sit in the bean bag chair and read books. After viewing the VSM video during intervention, Amy decreased her disengagement in activities to a mean of 3.8 per 15-minute observation ($M= 3.8$).

After the intervention phase ended, Amy's mother contacted me and reported that Amy was engaging more with her siblings at home. Her mother reported Amy wants to be around her siblings and gets upset when she is not included, she wants to do what her siblings are doing (if her siblings are coloring, Amy wants to color), and she is playing with them more (playing chasing games with her sister).

Participant 2 (Cal) Results

Cal transitioned needing minimal prompts to watch the "special video" daily during the intervention phase. Cal demonstrated repetitive language during the video such as "Build tower," "Hi, Lee," "Potato Head," and "puzzle." Call needed non-verbal prompts in the form of a gesture to the computer screen to attend to the video; then Cal would say, "Watch video." Cal

demonstrated echolalia and repetitive language consistently throughout viewing the VSM video and throughout his school day. It is difficult to determine if Cal's echolalia and repetitive language are due to his educational label of Autism Spectrum Disorder, or because he is an English Language Learner and that he learns by verbal repetition.

The results of the study concluded that Cal increased his participation in cooperative play activities, yet the pattern represented in the graph is variable. Baseline data revealed Cal participated in cooperative play activities an average of 2.3 intervals where he was engaged in cooperative play activities during a 15-minute observation ($M= 2.3$). During baseline data, Cal rarely joined a peer's play, but he did allow peers to join in his play. Cal's cooperative play skills during baseline data included building a tower with blocks, and building a tower with Legos© with Lee. Cal's cooperative play skills increased during the intervention phase to a mean of 4.1 times in a 15-minute observation ($M= 4.1$). It is difficult to determine if the increase in play skills are connected to the use of video self-modeling because the pattern in the data is variable and will be discussed in the next chapter ($M= 1.8$).

After the intervention phase ended, when Cal saw a staff member working on their laptop computer, he would say the name of the person and would then state “____, time for special video.” Upon arrival to school, he continued to say “time for special video,” “Cal sit down,” “Cal watch special video” and the cooperative play activities focused on in the VSM video by stating “build tower with Lee.”

Participant 3 (Lee) Results

Lee needed more adult prompting to transition to watch the “special video;” yet, once the video started, Lee was engaged and attended throughout the video with no adult prompting

necessary. Lee demonstrated consistent repetitive play routines during the intervention phase. Repetitive play routines were documented and consumed the full 15 minutes during the observation period. Lee consistently built the same Mr. Potato Heads© the first week of intervention, then participated in the same play scheme singing a song that included five Little People© figurines the second week of intervention. He consistently participated in parallel play, but did not acknowledge or look at the peer playing with the same materials. If a peer played too close to him, he would push the peer without looking at the peer or saying anything to the peer.

Video self-modeling increased Lee's overall cooperative play skills from a baseline average of one time ($M= 1$) in a 15-minute period to an average of 1.1 times where he was engaged in cooperative play activities in a 15-minute observation ($M= 1.1$). Lee minimally increased his participation in cooperative play skills a mean of .1 times in a 15-minute observation ($M= .1$). The last three days of intervention, Lee continued to increase his cooperative play skills from zero times on day 7, one time on day 8, and finally the last day of intervention (day 9) he participated in cooperative play activities four times. It is difficult to determine if the increase in play skills are connected to the use of video self-modeling because the data pattern represented in the graph is variable and will be discussed in the following chapter.

Reliability Check Results

Using the data collection form and research study procedures, a reliability check was completed by an Early Childhood Special Education Teacher (ECSE) to ensure researcher reliability in coding the data. She coded baseline video footage the same as I did during baseline data collection. After the ECSE teacher coded the baseline video footage, we discussed the

specific reasoning for coding decisions according to the participants' engagement in specific levels of play and activities.

Conclusion

Video self-modeling to increase cooperative play activities as demonstrated in this study determined positive results for 4-year-old and 5-year-old children with a variety of disabilities, yet the pattern in the data is variable for all three participants. Numerous factors may have influenced the results of the study and are discussed in the next chapter.

Chapter 5: Discussion

Overview

The primary purpose of the present study was to examine the potential of video self-modeling as an intervention to increase social interactions of 4-year-old and 5-year-old children with disabilities. The results of the study indicated positive results from the use of video self-modeling as an intervention to increase cooperative play skills, yet the pattern in the data is variable for all three participants. Furthermore, the results of the study indicated a positive increase in overall play skills and social interactions demonstrated throughout the intervention phase of the study compared to baseline data collection phase.

Overall, the participants increased their cooperative play skills and overall engagement in toys throughout the school day. The participants increased their engagement with peers and generalized peer engagement during different times of the school day (playing on the playground, playing in the gym, group times, and during transitions). During baseline data collection, the participants in the study often played alone with materials, most often with their back to peers, and occasionally tolerated sharing of the materials. By the end of the study, the participants tolerated sharing materials, allowing a peer to join in their play and joining a peer in their play.

During baseline phase of this study, it was noted that the three participants rarely played appropriately with the four activities demonstrated in the video self-modeling videos. For example, the Legos© and blocks would be thrown or piled into the sink of the play area. The Mr. Potato Head© pieces would be placed into the back compartment of the Mr. Potato Head©, and the pieces to the puzzle would be placed in another location of the play area. Before the

intervention began, all three participants demonstrated the inability to play functionally with the four activities represented in the video. During the intervention phase of the study, all three of the participants increased their play skills by playing appropriately with the four activities addressed in the video self-modeling videos. All of the participants demonstrated the consistent ability to play appropriately with the activities demonstrated in the video by building a tower with blocks, building a tower with Legos©, completing a Mr. Potato Head© and completing the simple shape puzzle.

The overall interest in peers increased through documentation throughout different times of the school day. Amy started greeting peers and increased her overall interest in peers. During the study, Cam and Lee started to hold hands when transitioning to different locations throughout the school day.

All three of the participants in the study increased their cooperative play skills in other activities that were not included in the video self-modeling videos. For example, the participants in the study played with the farm and baby dolls cooperatively with each other.

Based on these findings, video self-modeling appears to have increased all of the participants' overall play skills, yet the graphing patterns demonstrate variability. I chose not to discontinue the intervention to return to baseline. When the play skills decrease in returning to baseline and then increase again during the second intervention, assuming that the change in behavior is due to the intervention. Since I conducted research in my own classroom, I felt as though it was not ethical to stop the intervention.

The participants are now beginning to participate by joining in peers play and tolerating peers joining their play. Even so, these skills are an important factor to their overall social,

emotional, and behavioral development as the participants will be more prepared to participate in a variety of different play activities and be successful in a variety of social situations. The increase in social interactions and play skills is important for their next educational placement. The participants will be more ready to participate in cooperative play activities and appropriately interact with peers in their next school setting.

The skills the three participants gained in this study will be sustained in the educational setting by continuing the use of video self-modeling videos to increase their individual social interactions and play skills. It is difficult to determine if the skills the participants learned through VSM will continue in the months to come, I would recommend the viewing of VSM videos periodically to continue to promote cooperative play skills and social interactions. I will continue to encourage and promote a learning environment with continuous opportunities to engage with peers and play cooperatively.

In summary, even though it is difficult to fully determine if the video self-modeling videos are directly connected to the increase in cooperative play skills of the participants addressed in the VSM videos, it did demonstrate that all three of the participants in the study benefited from viewing the video self-modeling videos. The participants demonstrated this by increasing their overall social interactions and play skills in a variety of ways. All of the participants increased their ability to appropriately play with the four activities demonstrated in the video. The participants increased their social interactions by greeting peers and holding hands with peers. All of the participants increased their overall ability to tolerate a peer joining in their activity, joining a peer in their activity, overall engagement with toys, and awareness of peers.

A few individual factors may have influenced individual participants' results in the study. Losing power on Amy's last day of intervention may have influenced the last day of her intervention because the schedule changed, there was increased darkness in the play area, and temperatures in the classroom dropped.

During the second week of intervention, Cal had a new addition to his family, demonstrating more difficulty in all areas of the school day. He needed more adult support and prompting to participate and engage in activities throughout his school day. The birth of Cal's baby brother may have influenced the results of the study because he demonstrated more difficulty throughout his school day.

Study Limitations

I have identified five limitations to my research study. First, I revised the typical ABAB single case design to an AB single case design by not returning to baseline. When the play skills decrease in returning to baseline and then increase again during the second intervention, assuming that the change in behavior is due to the intervention. Since I conducted research in my own classroom, I felt as though it was not ethical to stop the intervention. Revising the typical ABAB single case design to an AB single case design conducted in this study, demonstrated the increase in cooperative play skills were connected to the intervention.

Secondly, the individual differences of the participants in the study can be considered a limitation. Even though I attempted to select the participants in the study is a limitation due to individual differences of the participants. I attempted to select children with similar social interaction skills and abilities; individual differences may have affected the research study results. For instance, Cal is an English Language Learner (ELL) and only hears English when he

is at school and out in the community. It is difficult to know all of the participants' exact social abilities due to their demonstrated inconsistent social skills.

Third, being an employee of a large independent school district, the school district requested that I only use videotaping to collect baseline data, and that I do not videotape during the intervention phase. I originally planned to videotape the 15 minutes during the intervention observation period and code the videotape after school to avoid being a distraction to the participants and other students in the class and to continue to run my classroom. During the intervention phase, I sat near the play area to record data in thirty-second intervals. By sitting near the play area, I was extremely distracting to the participants and the other students in the class. The participants and other students tried to engage and interact with me during the observation period rather than engaging in activities.

Fourth, education labels of the participants could be a limitation to the study because of the educational label describing how the students learn the best. The three participants in the study received Special Education Services under different educational categories, which may have an influence on how they learn using video self-modeling. Lee and Cal both receive Special Educational Services under the Educational Label of ASD, and research has shown that students with ASD are visual learners (Grandin, 1999). Therefore, Cal and Lee may have an advantage to VSM intervention because they are visual learners.

A final limitation to the study is how many days of the week the students attend. Amy and Cal attend school four sessions a week, yet, Lee only attends school three sessions a week. One day of school was missed for all three participants in the study. Lee also has a longer break from school with 4 consecutive days at home compared to the other two students' 3 consecutive

days at home. All of the participants in the study qualified for Extended School Year Services for regression of skills after long breaks from school. The participants may regress over 3- to 4-day weekly breaks from school as well, therefore demonstrating more difficulty on the first day of the week back to school.

New Additions to the Literature

The results of the current study add to the literature base for VSM for a variety of reasons. There are limited research studies thus far that have addressed the participants attending a center-based ECSE program with peers with disabilities in a neighborhood school setting. There are several research studies focusing on VSM in the area of social interactions and play, but there is limited research specifically focusing on social interactions in the area of cooperative play skills. In the literature thus far, research has focused on VSM in children with the same educational label or diagnosis. Research has demonstrated positive gains for students with disabilities having typical peers to model appropriate social interactions. The focus of the current study is on students with disabilities having peers with disabilities as their models for appropriate social interactions. Finally, using VSM to increase social interactions in a variety of ways has been addressed in research, yet the specific area of cooperative play is rarely discussed.

To summarize, the current study filled in the gaps in VSM literature by adding students with different educational labels in one study, students participating in a center-based classroom with peers with disabilities, and by providing research in social interactions specifically in the area of cooperative play.

Next Steps in Research

There needs to be continued research on video self-modeling in increasing cooperative play skills of 4-year-old and 5-year-old children with a variety of disabilities in a center-based classroom to rule out the limitations of VSM discussed in the current study. To do this, I would suggest creating a longer intervention phase to determine skill maintenance ability upon study completion. I would suggest generalizing skills learned through VSM by adding new settings such as home and in the community would be beneficial to the participants. VSM can be used to teach a variety of skills such as academic, functional, social, emotional, behavioral, motor, and communication. VSM can even be used to teach toy functions, which would be beneficial to participants demonstrating difficulty playing with toys.

Conclusions

The results of the current study demonstrated positive results using video self-modeling in increasing play skills in 4-year-old and 5-year-old children with a variety of disabilities in a multi-categorical classroom setting. All three of the participants increased their overall participation in cooperative play skills in the four activities addressed in the video self-modeling videos by either joining a peer in cooperative play activities or allowing a peer to join in their cooperative play activity. It is difficult to determine the connection of viewing the VSM video and the increase in cooperative play skills due to the variability of the results. This concern could be eliminated if I chose to discontinue intervention to return to baseline. I chose not to discontinue intervention to return to baseline. When the play skills decrease in returning to baseline and then increase again during the second intervention, assuming that the change in behavior is due to the intervention. Since I conducted research in my own classroom, I felt as

though it was not ethical to stop the intervention. It is difficult to determine the study limitations impact on the study results. The current research demonstrated all three of the participants in the study benefited from the viewing of the video self-modeling videos. The participants demonstrated an increase in overall social interactions and play skills in a variety of different ways. All three of the participants increased appropriate play skills with the four activities demonstrated in the video, increased social interactions, tolerating sharing materials with peers, tolerating a peer joining in their activity, joining a peer in their activity, and overall engagement with toys and activities.

To Conclude

The findings in this study will improve the education and lives of young children with disabilities in several ways. In the education setting, the use of video self-modeling can increase a variety of skills (academic, functional, social, emotional, behavioral, motor, and communication skills) and promotes independence to young children with disabilities. The participants in the study enjoyed watching themselves in a video while demonstrating pride in being successful.

Students with disabilities and their families face various challenges in home and school environments, and the use of video self-modeling can reduce some of their daily challenges. Video self-modeling is not necessarily an intervention for a child's school setting. It can also be used in the home setting to teach a variety of skills that promote success in the home setting. To conclude, the use of video self-modeling can make a positive impact by promoting success for young children with disabilities and their families in multiple natural settings.

Special education services strive to provide young children with disabilities more and more opportunities to reach their utmost potential in all environments. Video self-modeling is yet another intervention option that can provide new opportunities and better skill development to improve the lives of young children with disabilities and their family members—the ultimate goal for all early childhood special educators.

Keywords

Cooperative play: two or more children interacting in a common play venture (Lounsbury, & Bell, 1976).

Video Modeling (VM): a technique that involves demonstration of desired behaviors through active video representation of the behavior (Bellini et al., 2007).

Video Self-Modeling (VSM): a specific application of video modeling that allows the individual to imitate targeted behaviors by observing herself or himself successfully performing a behavior (Dowrick, 1999).

Autism Spectrum Disorder (ASD): individuals with a deficits in social reciprocity, language, and communication, as well as repetitive behaviors and/or stereotyped interests (American Psychiatric Association, 2000; Eigsti & Shapiro, 2003).

High Functioning Autism (HFA) and Asperger Syndrome (AS): individuals often experience difficulties with initiating and responding, interpreting nonverbal cues, initiating and maintaining eye contact, exhibiting appropriate emotional reactions, and using nonverbal behaviors as maintenance techniques (American Psychiatric Association, 2000; Atwood, 2000; Weiss & Harris, 2001).

Developmental Delay (DD): individuals with a deficient of at least 1.5 standard deviations below the mean of same aged peers in at least two areas of development (cognitive, social/emotional/behavioral/fine motor/gross motor/adaptive/communication).

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Appendix A

Data Collection Form

Student: _____ Date: _____

Observations were recorded every 30 seconds at the beginning of the 30 second interval.

	(0) Not Engaged	(1) Looking at Activity	(2) Playing alone with activity	(3) Parallel Play sharing materials	(4) Allowing a peer join in activity	(5) Joining a peer in activity
Mr. Potato Head©						
Puzzle						
Legos©						
Blocks						
Other						

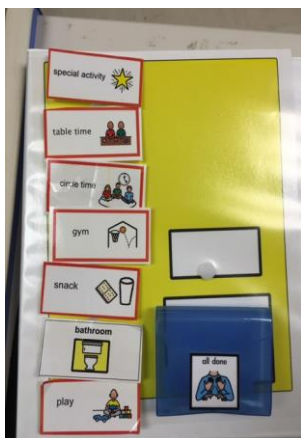
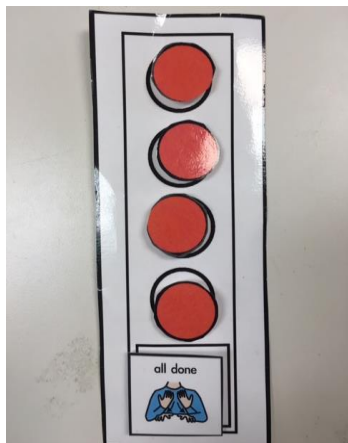
Appendix B

Study Phase Table

	WEEK 1	WEEK 2	WEEK 3	WEEK 4
	<i>Feb. 2</i>	<i>Feb. 9</i>	<i>Feb. 16</i>	<i>Feb. 23</i>
AM Student 1	Baseline	Intervention	Intervention	
PM Student 2/ Student 3		Baseline	Intervention	Intervention

Appendix C

Visuals



Appendix D

Video Self-Modeling In Increasing Social Interactions Study Participant Parent Consent Form

Dear Parents/Guardians of _____,

Your child is invited to participate in an innovative research study exploring the effectiveness of video self-modeling in increasing social interactions of young children with disabilities.

Background Information and Purpose

I am requesting your permission for your child to participate in a study that I am conducting for my Master's Program at St. Cloud State University. The purpose of my study is to explore the effectiveness of video self-modeling in increasing social interactions of young children with disabilities, specifically in cooperative play activities. I plan to use video self-modeling technology to increase cooperative play skills of your child. A cooperative play activity is two or more students working together to get the same end result when playing together. An example of a cooperative play activity is building a tower with blocks.

Procedures

Your son/daughter will be videotaped when completing a cooperative play activity with adult coaching as needed. Then, I will edit the video to a 2-3 minute video clip to remove all adult coaching. Your son/daughter will view edited video of themselves participating in a cooperative play activity every day upon arrival to school in a designated quiet area of the classroom for 4 school weeks. The cooperative play items from the video will be available in the play area daily during playtime for everyone including your son/daughter.

Data will be collected during the study by observing and documenting your child daily during playtime for 15 minutes.

Risks

There are no anticipated risks related to participation in this study.

Benefits

The benefits of your son/daughter participating in the study is the possibility of your child increasing their cooperative play skills. If video self-modeling is successful for your child, video self-modeling can be used in other areas to teach a variety of skills your child may have difficulty with. The study will also assist me in determining if video self-modeling is a successful strategy in teaching young children with disabilities a variety of skills.

Participant Consent/Refusal

Your son/daughter will be encouraged to watch the video self-modeling video of them completing play activities. Behavior strategies will be used to encourage your child to watch the video (adequate warning and time for the previous activity ending, scheduling the “special video” in their daily schedule, verbal first, then, visuals, motivators). If your child refuses to participate, they may do so at any time. If your child refuses to participate in watching the video or participate in play activities, your child will follow their typical daily schedule.

Confidentiality

To ensure privacy and confidentiality your child’s name will not be written on any data form. In the final written report, the name of your child will be changed to ensure family privacy and confidentiality. Throughout the study, the videotaped materials will be stored on a locked

computer, and the data collection forms will be stored in a locked file cabinet. All data and video recordings will be erased when the study is complete.

In addition to using data for the final paper that will remain on permanent file at the St. Cloud State University Miller Learning Center (library), data may be also be published in professional journals at a later time. At no time during the study or reporting will your child's name be used in any manner.

Contact Information/Research Results

If you have any questions concerning this study, please let me know. When the study is complete, you may contact me to obtain the results of the study. You may contact me at 763-506-6191.

I look forward to having your child participate in this innovative study and I thank you in advance for your cooperation as I continue to complete my graduate study at St. Cloud State University. This entire research project is completed under the advisement of Dr. Jane Minnema, Associate Professor, St. Cloud State University. If you want further information, you can contact Dr. Jane Minnema by email at jminnema@stcloudstate.edu.

Acceptance to Participate

If you voluntarily consent to have your child participate in this study, can you please sign and return this form by January 29, 2016.

(Parent/Guardian Signature)

(Date)

Appendix E

Video Self-Modeling In Increasing Social Interactions Study Non-Participant Parent Consent Form

Dear Parents/Guardians of _____,

Your child is invited to participate in an innovative research study exploring the effectiveness of video self-modeling in increasing social interactions of young children with disabilities.

Background Information and Purpose

I am conducting a Research Study for my Master's Program at St. Cloud State University. The purpose of my study is to explore the effectiveness of video self-modeling in increasing social interactions of young children with disabilities, specifically in cooperative play activities. A cooperative play activity is two or more students working together to get the same end result when playing together. An example of a cooperative play activity is building a tower with blocks.

Participants chosen to participate in my research study were selected based on specific social engagement criteria. Your child is not a participant in the study. The non-participant students in the class may unintentionally be videotaped throughout the length of the study.

Procedures

The study participants will be videotaped when completing a cooperative play activity with adult coaching as needed. Then, I will edit the video to a 2-3 minute video clip to remove all adult coaching. The participants will view edited video of themselves participating in a cooperative play activity every day upon arrival to school in a designated quiet area of the

classroom for 4 school weeks. The cooperative play items from the video will be available in the play area daily during playtime for everyone to play with.

Your child might be unintentionally videotaped during this research project by walking in front of the video camera, talking to the staff member conducting the recording, or playing near the student being videotaped during daily 15 minute observation period. If you do not want your child potentially videotaped, I will make sure your child is not in the videotaped area of the classroom. Your child will be doing other play activities in another area of the school with other school staff.

Risks

There are no anticipated risks related to participation in this study.

Benefits

A benefit of the study is the possibility of the participants in the study increasing their cooperative play skills with your child, possibly increasing the play skills of your child. Your child could benefit from the study by the participants playing more effectively and successfully with your child. If video self-modeling is successful, video self-modeling can be used with your child to teach a variety of skills specifically for your child. The study will also assist me in determining if video self-modeling is a successful strategy in teaching young children with disabilities a variety of skills.

Confidentiality

To ensure privacy and confidentiality, the videotaped materials will be stored on a locked computer, and the data collection forms will be stored in a locked file cabinet. All data and video recordings will be erased when the study is complete.

In addition to using data for the final paper that will remain on permanent file at the St. Cloud State University Miller Learning Center (library), data may be also be published in professional journals at a later time.

Contact Information/Research Results

If you have any questions concerning this study, please let me know. When the study is complete, you may contact me to obtain the results of the study. You may contact me at 763-506-6191.

I look forward to having your child participate in this innovative study and I thank you in advance for your cooperation as I continue to complete my graduate study at St. Cloud State University. This entire research project is completed under the advisement of Dr. Jane Minnema, Associate Professor, St. Cloud State University. If you want further information, you can contact Dr. Jane Minnema by email at jeminnema@stcloudstate.edu.

Acceptance to Participate

If you voluntarily consent to having your child potentially be video recorded during the length of the study, can you please sign and return this form by January 29, 2016.

(Parent/Guardian Signature)

(Date)