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Comparing video modeling to discrete trial teaching for teaching daily living skills

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COMPARING VIDEO MODELING TO DISCRETE TRIAL TEACHING FOR TEACHING DAILY LIVING SKILLS

by

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I would like to thank my family for their patience and understanding throughout this journey. I know at times it was not easy, and they remained supportive and stood by me from the beginning.

I would like to thank the family of the student that I worked with for their willingness to let me into their home to conduct my research. They trusted me throughout this embarking and never doubted my intentions.

Abstract

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COMPARING VIDEO MODELING TO DISCRETE TRIAL TEACHING
FOR TEACHING DAILY LIVING SKILLS
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The purpose of this research was to examine the effectiveness of implementing video modeling to teach daily living skills to a fifteen year old boy who is diagnosed with autism. This was a single subject, repeated measures research design with the repeated measures being teeth brushing, making a sandwich, and doing the dishes. The daily living skills chosen were based upon a rating scale administered to the parents. Baseline data was collected for the three daily living skill tasks using task analysis probing. Once baseline data was collected, discrete trial teaching with implanted. Data was collected and the level of independence was noted. Point of view video modeling was then implemented to teach the three daily living skills, with data collected at each session. The level of independence was recorded. All data was compared between the interventions.

Point of view video modeling proved to be more effective than task analysis probing or discrete trial teaching to teach the three daily living skills. The student achieved greater independence after implementation of video modeling compared to the baseline and discrete trial teaching. Although discrete trial teaching showed positive effects, point of view video modeling proved to be more effective, as evident by the increase in the percentage of independence for each daily living skill.

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Chapter 1

Introduction

In recent years, video modeling has become an essential learning tool for teaching children with autism in and outside of the classroom. Many educators who have tried traditional teaching methods and have not achieved success, have turned to video modeling as a modern day way of teaching the acquisition of new skills, and to help develop skills that have not yet been mastered. Video Modeling is a visual teaching method that occurs by watching a video of someone modeling a targeted behavior or skill and then imitating the behavior/skill watched. Albert Bandura, a well known psychologist, developed the social learning theory that recognized that people can learn new information and behaviors by watching other people. This became known as observational learning or modeling. In the 1970's, Albert Bandura conducted what has now become a famous experiment, titled *The Bobo Doll Experiment*, where he demonstrated that children learn and imitate behaviors they have observed in other people. As a result of this experiment, various models of learning through observation were developed. A distinct model, which led to the development of video modeling, was termed "the symbolic model". The symbolic model involved real or fictional characters displaying behaviors in books, films, television programs, or online media. It was after Bandura's experiment was conducted, that video modeling became a focus for research and implementation.

Functional and life skill programs are an integral component to the curriculum for an individual with autism. Many children with cognitive deficits, especially children with a diagnosis of autism, find daily living skills especially challenging. Children who

are typically developing learn daily living skills by watching and imitating others, and classically these skills do not require much teaching. Typically developing children are motivated to do things for themselves and want to "fit in" and be like other children their age. Children with autism tend to not be aware of the social benefits of performing daily living skills independently, and are unaware of how to imitate on their own. Many children with autism need systematic, and at times, intensive teaching in self-care and daily living skills due to deficits in language and attention skills, interfering behaviors, sensory impairments, and deficits in social awareness. Learning to perform activities of daily living, like dressing, self-feeding, and toileting, is crucial to a person's independence and their ability to be a functioning member of society.

In this study, I examined the effectiveness of implementing video modeling to teach daily living skills to a fifteen year old boy who is diagnosed with autism. I believe that implementing video modeling to teach daily living skills will prove to be more successful than implementing traditional teaching methods, such as discrete trial training. The three daily living skills that I will evaluate are teeth brushing, making a sandwich, and doing the dishes. The three daily living skills chosen to evaluate were based upon a rating scale that was administered to the parent. Teeth brushing, making a sandwich, and doing the dishes received the highest score for being areas of concern. The study will be conducted within the student's home, within the natural environment. Baseline data will be determined by using task analysis teaching probes for each daily living skill. Task analysis is the process of breaking a skill into smaller, more manageable steps in order to teach the skill. As the smaller steps are mastered, the learner becomes increasingly independent in his or her ability to perform the larger skill. Data will be collected for

four days, and an average scored will be obtained. Any steps that the student can complete without assistance will be noted. Once baseline data is obtained, discrete trial teaching will be used to teach the subject each individual step to complete the three daily living skills as independently as possible. This will occur over the course of twelve sessions. Once data is obtained from the discrete trial teaching phase, videos will be created for each daily living skill. The videos will be watched and target skills will be performed at times of the day when these skills would naturally occur. This will occur over the course of twelve sessions. For example, if the target skill is making a sandwich the student will watch the video at breakfast, lunch, or dinner time, which would be the time of day when he would naturally make a sandwich. The student will watch the video with prompts provided when necessary, to gain and/or keep attention. The student will be allowed to watch the video an appropriate number of times before he is expected to apply what was watched to perform the target skill. When the student begins to use the video modeling to perform the target skill, the video will be stopped after each step, so the target skill can be performed by the student. Progress will be monitored and data will be taken on each trial to note the effectiveness of the intervention. If the student is not making progress after collecting data on three to five occasions, I will re-evaluate the video, and make necessary changes. This may mean making the video more detailed or adding steps to the data analysis. If the student is making progress, instruction will continue until he has reached maximum proficiency. As the student makes progress, prompting will be faded to increase independence.

The research question examined in this study is:

1. Will the student achieve more independence with the three daily living skill tasks by the end of the point of view modeling phase, in comparison to baseline data and discrete trial teaching data obtained?

Video modeling is a great tool that can be used in and outside of the school setting to teach a variety of skills. Video Modeling can be successfully used to teach social-communication skills, functional skills, and behavioral functioning. It is easy to use, is cost effective, and with the appropriate knowledge, is easy to create. A para-professional is just as capable as a school teacher to create and implement this type of instruction within the home or school setting. Many children, especially children with autism, are visual learners, and are naturally drawn to video and other visual inputs. Video modeling for children with autism is a natural "fit" for teaching a variety of skills. Video modeling gives the opportunity to teach multiple skills within the same video, and is not time consuming when used correctly. One of the most important things to keep in mind when implementing a video modeling technique, is assuring that the teaching occurs within the naturalistic environment. When used appropriately, skills are learned at a more accelerated pace, and success rates are high.

Chapter 2

Literature Review

Daily Living Skills

Daily living skills are the skills that individuals perform on a daily basis to take care of themselves. Daily living skills are also referred to as self care skills. Some examples of daily living skills include feeding, toileting, selecting proper attire, grooming, getting dressed, and preparing a meal. Many individuals with autism have deficits in their ability to function independently and need extensive instruction to master daily living skills. The tendency to insist on sameness can also make acquiring life skills difficult. For instance, issues around eating and self-feeding can be complicated by a child's acceptance of only a limited number of foods – preferences that may also be connected to sensory issues surrounding taste, texture, or appearance. The first step in any teaching process involves selecting the skills to be taught. When choosing daily living skills for instruction, the goal should he to increase the independence of the student (Snell & Farlow, 1993). Brown, Nietupski, and Hamre-Nietupski (1976) stated that all educational activity should be directed toward meeting the "criterion of ultimate functioning." This requires us to ask the question, Will the student be able to function as an adult if he or she does not learn the skill being taught? Other factors to be considered when selecting skills for instruction are the skills the student currently performs, the demands of the environment in which the student participates, the student's chronological age, the manner in which peers perform the task, and the typical environment in which the task will be performed (Berkell, 1992; Snell & Farlow, 1993). The concept of ADLs (activities of daily living) was originally proposed in the 1950s by Dr. Sidney Katz and his team at the Benjamin Rose Hospital in Cleveland, Ohio and has been added to and

refined by a variety of researchers since that time. Daily living skills are among the functional skills needed for success in current and future environments, and they consist of those activities needed in domestic, employment, and community settings that allow a person to be as independent as possible (Brown et al.1979; Test et al. 2006; Volkmar and Wiesner 2009). Typically, daily living skills are learned in a naturalistic setting through observation and incidental teaching. An individual's performance of activities of daily living is the result of person–environment–task interactions (Summers, Larkin, & Dewey, 2008). If these skills are not learned in this manner, it may be important for them to be taught from a systematic approach.

Teaching Daily Living Skills to Children with Autism

One of the most significant concerns of parents of children with autism, as well as parents of children with other disabilities, is whether or not their child will live a safe, productive, and independent life. Individuals acquiring independence early in life have more potential to thrive in domestic and vocational settings (Pierce & Schreibman, 1994). Increased attention has been focused on teaching children with disabilities functional behaviors such as daily living skills, which may include preparing simple meals, household chores, and getting dressed. The acquisition of these skills can decrease some of the burden placed on parents and caregivers due to the time and energy required to perform these tasks for the child. There is a vital need for teaching strategies that are specifically designed for individuals with autism to help foster their independence (Shipley-Benamou, Lutzker, & Taubman, 2002). Through the use of activity schedules, Pierce and Schreibman (1994) successfully taught daily living skills to children with autism in unsupervised settings. There are also numerous accounts of special savant skills

in children with autism, including memories for directions and special artistic abilities (O'Connor & Hermelin, 1990). Bennett and Dukes (2014) examined the peer-reviewed literature on teaching daily living skills to secondary students (ages 12-22 years) with autism. A search of the literature beginning from January 2000 to October 2012 was conducted and only 14 studies being their exact inclusion criteria were identified. There is limited research examining instructional strategies for teaching daily living skills to this population. Twenty-two studies were identified with the majority being related to social skills development and many of the studies had younger children as the participants. A variety of interventions were reviewed showing varying degrees of effectiveness. Considering the results of this review, as well as those conducted by other investigators (Matson et al., 2012; Palmen et al., 2012), additional research is clearly needed investigating the strategies to develop and maintain daily living skills among adolescents and adults with ASD. This population has the potential to live, work, and recreate in integrated community settings (Wehman et al. 2009). Many individuals with ASD can likely achieve greater independence when families, teachers, and related service professionals have a variety of evidence-based interventions to implement. One intervention to teach daily living skills to children with autism, which has become more widely studied in recent years, and used on a daily basis, is video modeling. By using video modeling to teach daily living schools, children are learning through visual observation and repetition, areas that typically produce positive outcomes.

Video Modeling

Video modeling is a teaching tool that can be used for many different age groups, academic and cognitive levels, and various learning needs. Video modeling has been used to teach many skills, including social skills, communication, and athletic performance. In more recent years, it has been proven to be a successful intervention for children with autism. During a video modeling intervention, the person being taught the skill observes a video of a targeted skill being performed successfully. Consistent with Bandura's (1969) social learning theory, video modeling is a versatile intervention that capitalizes on the potency of observational learning and is well suited to address the educational needs of students with autism (Delanco, 2007). Watching predominantly positive and/or successful behaviors of one's self, as opposed to negative and/or unsuccessful behaviors, is effective as it increases both attention and motivation to attend to the model behaviors and self-efficacy (Bandura, 1997).

There are multiple forms of video modeling that can be used to teach the acquisition of skills. Video self-modeling, point of view modeling, video priming, adult or peer modeling, and in-vivo modeling are the five forms of video modeling that are commonly used. Video self-modeling uses the individual as a model, while peer or adult video modeling uses another person as the model. Point of view modeling is when the video is viewed from the perspective of what the student would see, hear, and say in the target situations, while video priming is when the student views a video of an experience that he or she is likely to have difficulty with before the student is engaged in the challenging situation. This is similar to a social story, but in video form. In vivo-modeling, the student views live models perform the desired target behavior, this is not

typically taped. There are at least ten steps included in the actual video modeling process, with room for adjustments to occur as needed (Sigafoos, O'Reilly, & De La Cruz, 2007).

Video Modeling to Teach Children with Autism

Many interventions have proven to be successful in teaching children with autism. Video modeling is a highly researched intervention for children with various developmental disabilities, autism being one of the most highly researched. Video modeling has been used to teach a variety of skills to children with autism. In multiple studies, including decades of scientific research, video modeling has been shown to be one of the most effective methods for teaching social skill and target behaviors to children with autism.

Anderson, Moore, and Shrestha (2012) examined the effectiveness of point-of-view video modeling in a forward-chaining procedure to teach a 4-year-old boy diagnosed with autism to serve himself a snack. Since the boy is four years old, serving himself a snack is categorized as a daily living skill. A changing criterion design was used to evaluate the effects of the intervention on the boy's ability to independently prepare and serve himself Weetbix. During the intervention sessions, John was asked if he was hungry. If he said he was, he was asked to watch the video on the desktop computer in the family room. After viewing the video, John was instructed to get some Weetbix for himself and he was prompted when necessary. At times where John forgot the steps, he was verbally prompted. At the completion of the phase, John was given verbal praise for his effort, as well as high fives and cuddles from his mother (chosen as high interest rewards). The results indicated that the combination of point-of-view

modeling and forward chaining was effective in teaching the boy to serve himself a snack without any prompting. Unfortunately, results also indicated that although the skill was maintained at follow-up, generalization to snacks other than Weetbix and to a different setting was limited. Parents reported satisfaction both with the procedures undertaken and with the outcomes of the intervention, although generalization was not achieved across items and settings.

Similarly, Cannella-Malone, Tullis, Wheaton, and Wu (2011) examined the effectiveness of point-of-view video modeling and video prompting interventions to teach six children (ages 11-13) diagnosed with autism to do laundry and wash dishes, both daily living skills. They used a multiple probe across participants with alternating treatments design. Results indicated that although point-of-view video modeling proved to be effective in teaching daily living skills to the participants with autism, more significant results were indicated when video modeling was paired with video prompting.

Cannella-Malone et al. (2011) found that video prompting and video modeling were more effective during skill acquisition for students with autism. They concluded that the attention span of students with autism is better addressed by short video clips of individual segments rather than showing an entire skill segment after which the participant is expected to perform all of the component steps of the skill. Limited demands place on attention and memory seem and the length of videos are important when considering video modeling as an intervention for teaching daily skills. According to Delanco (2007) video modeling can teach these target skills very quickly compared to other methods, and typically the learned behavior is "generalized," (i.e., the child is able to exhibit the behavior in real-life situations that are similar to the video modeling

scenario). Video modeling also has the proven ability to decrease problem behaviors, including aggression, tantrums, and other off-task activities. Video modeling interventions can facilitate rapid skill acquisition in children with autism, but skill development is only meaningful if the skills are useful in normalized settings (Delanco, 2007). According to Delanco (2007), video modeling is uniquely suited to the characteristics of individuals with autism who may have significant learning deficits and find in challenging to attend to relevant information and engage in social interaction.

In a meta-analysis of 23 studies published between 1987 and 2005, Bellini and Akullian (2007) concluded that video modeling is an effective intervention strategy for addressing skills important to self-determination for students with ASD, including behavioral functioning, social-communication skills, and functional skills. Similar to Bandura's theory of modeling, results showed that students performed best when they were highly motivated and attentive because they enjoyed watching the videos. (*Bellini, S., & Akullian, J., 2007).* Visual images create a "visual database" in the brain. This database can be accessed to remember learned skills. This is the same as an auditory learner would do; access the audio database to remember. Temple Grandin (an autism activist and adult with autism) has referred to her brain as a collection of video tapes. When she needs to think of something, she plays the appropriate video in her mind.

> This is how she thinks:
>
> Grandin (2010) stated, I think in pictures. Words are like a second language to me. I translate both spoken and written words into full-color movies, complete sound, which run like a VCR tape in my head. When somebody speaks to me, his words are instantly translated into pictures. Language-based thinkers often find

> this phenomenon difficult to understand, but in my job as an equipment designer for the livestock industry, visual thinking is a tremendous advantage. Visual thinking has enabled me to build entire system in my imagination.

Video modeling has proven to be an effective intervention for children with autism based upon a multitude of reasons and explanations.

Summary

The purpose of my study is to examine the effectiveness of implementing point of view video modeling to teach a fifteen year old boy with autism daily living skills. The three daily living skills being targeted are teeth brushing, making a sandwich, and doing the dishes. The three daily living skills chosen to evaluate were based upon a rating scale that was administered to the parent. Baseline data will be collected using a task analysis protocol. I hope to prove that it is more successful to use point of view video modeling to teach daily living skills rather than discrete trial, task analysis probing.

Chapter 3

Methodology

Setting

The setting for this study was the subject's home. The participant lives in a suburban area in southern New Jersey with his parents and younger sibling. The family lives in rancher style home with a basement. All research took place during after school applied behavior analysis (ABA) service hours provided through the school district. One parent was present in the home at all times, although not seen by the subject.

Participant

The participant ME, is a fifteen year old Caucasian male who is in the ninth grade. He receives special education services at a private school for students ages 5-21 with various special needs. He has an Individualized Education Plan that was developed jointly by the school district in which he resides, along with the private school in which he currently attends. He was diagnosed with autism when he was five years old, and this remains as his diagnosis. ME is non verbal and uses sign language and an IPad to communicate. ME receives speech/language services three times a week, occupational therapy two times a week, and physical therapy one time a week, all during school hours. His parents are particularly concerned with his needs as he begins to enter adulthood. They are older parents and are concerned with his care once they are no longer able to care for him themselves. Beginning in May, ME will begin job sampling three times a week, provided through his current school district, as designated in the revised I.E.P.

ME arrives at school by 8:45 am each morning and arrives home by 4:15 pm each afternoon. He then receives home ABA therapy services provided through the school district three days a week, and respite/behavioral services provided by the state five days

a week (he receives services from both providers on the weekends). He receives a total of thirty-five hours of in home therapy each week. Both parents attended college, and have advanced degrees. His father works full time, and his mother is currently taking a leave from her current position as a social worker due to illness. His sister attends a private school in the area.

Procedure

The study was conducted over a fourteen week period. The intervention took place within the client's home, while at least one family member was present (although not seen by the client during intervention). Sessions took place twice a week over the fourteen week period, with data collected at each session. Three daily living skills were evaluated; teeth brushing, making a sandwich, and doing the dishes. These three daily living skills were chosen based upon a rating scale that was administered to the parent. Teeth brushing, making a sandwich, and doing the dishes received the highest score for being areas of concern.

Sessions 1 through 4 began by probing all three tasks; teeth brushing, making a sandwich, and doing the dishes. An SD was presented at the beginning of each task, and at each subsequent step, and prompt level required was recorded. Baseline data was recorded using a task analysis protocol.

Session 5 began by using discrete trial teaching to teach each skill required to master the first task, teeth brushing. The SD (discriminative stimulus) used for this task was "ME, it's time to brush your teeth". ME was taught each step in a forward chaining procedure. Each step had a different SD used to signal a response for each individual step. Data was recorded in a task analysis protocol. ME received a 1, 2, 3, or 4 for each

individual step based upon how much support he required. Refer to table 1 for prompt key.

Table 1

Prompt Key for Data Collection

Prompt Key:
1= Independent
2= Gesture prompt
3= Partial Prompt
4= Full Physical Prompt

Each time the task of teeth brushing was probed, data was taken. At the end of each session the number of steps that were completed independently during each probe were added and converted to a percentage. This percentage is correlated to the percentage of independence at each probe, with 100% being the goal.

Session 6 began by using discrete trial teaching to teach each skill required to master the second task, making a sandwich. The SD (discriminative stimulus) used for this task was "ME, it's time to make a sandwich". ME was taught each step in a forward chaining procedure. Each step had a different SD used to signal a response for each individual step. Data was recorded in a task analysis protocol. ME received a 1, 2, 3, or 4 for each individual step based upon how much support he required. Similar to teeth

brushing, each time the task of making a sandwich was probed, data was taken. At the end of each session the number of steps that were completed independently during each probe were added and converted to a percentage. During session 2, teeth brushing steps were continued to be taught using discrete trial teaching, with data taken.

Session 7 began in the same way as the previous two sessions, with discrete trial teaching being used to teach each step required to complete the third task, washing the dishes. The SD used for this task was "ME, it's time to wash the dishes." ME was taught each step in a forward chaining procedure, with a different SD used for each step. Data was recorded in a task analysis protocol. ME received a 1, 2, 3, or 4 for each individual step based upon how much support he required. Each time the task was probed, data was taken. Percentage of independence was calculated at the end of each session. During session 3, steps for teeth brushing and making a sandwich were probed as well, with a discrete trial teaching procedure. Data was taken during each task.

Nine additional sessions (sessions 8-16) took place, continuing to use a discrete trial procedure. During each additional session, all three tasks were probed at least once. Data was taken and percentages of independence were recorded. After all data was collected using a discrete trial teaching approach, point of view videos were created on an IPad to teach the three daily living skills.

Scripts were created prior to the recording of the point of view video models. Recording took place within the most natural setting, the home of ME. All materials used were the materials within the home, which ME would be using while completing the tasks. The videos were created in a task analysis, forward chaining format. When each

step was completed, ME would need to swipe to the left on the IPad to view the next step in the task.

At session 17, intervention (video modeling) was implemented. It began by having ME sit in a chair in the bathroom with his IPad. He was then prompted to view the video modeling task of teeth brushing. Prompts were provided as needed to keep ME focused while watching the video. ME watched the video multiple times throughout the session during times that teeth brushing would be appropriate. At the end of the session it was explained to ME that he would now use the video to help him brush his teeth. The SD "ME, it's time to brush your teeth" was given. ME was prompted to touch the IPad to have the video begin. When the target skill was completed on the video, it was paused for ME so he could complete the step himself. The video was stopped after each step of the task analysis so the target skill could be performed. At this point in the intervention, the video was played and paused by myself, rather than ME. The goal is to have ME complete these skills independently as well as the target skills. Data was recorded, including the prompt levels required for ME to complete each target skill, as well as the percentage of independence. It was also noted if ME was able to pause and play the video independently. Data was recorded on the same task analysis sheet that was used for the initial discrete trial teaching phase.

At the beginning of session 18, ME was prompted to sit at the kitchen table with his IPad to watch the video modeling task of making a sandwich. At times when ME was having difficulty attending to the video, prompts were provided. ME watched the video multiple times, with a focus being on the steps that ME required the most prompting for. When it was time for ME to eat lunch, it was explained to ME that he would need to use

the video modeling to help him complete the task. ME was given the SD "ME, it's to time to make a sandwich". ME was prompted to touch the IPad to begin the video. Similar to the task of teeth brushing, when the target skill was completed on the video, it was paused for ME so he could complete the step himself. The video was stopped after each step of the task analysis so the target skill could be performed. At this point in the intervention, the video was played and paused by myself, rather than ME. Data was recorded, including the prompt levels required for ME to complete each target skill, as well as the percentage of independence. It was also noted if ME was able to pause and play the video independently. Data was recorded on the same task analysis sheet that was used for the initial discrete trial teaching phase. After lunch and a short break, Matan was prompted to brush his teeth. He used the video modeling of teeth brushing to complete the task. Data was recorded.

During session 19, ME was prompted to sit at the kitchen table to view the video modeling of washing dishes. Prompts were provided as needed to keep ME's attention. ME viewed the video multiple times, with an emphasis being on the target skills that required full prompting previously noted. At the end of the session, when it was time for ME to wash the dishes, he was prompted to get the IPad out to view the video modeling for washing dishes. The SD, "ME, it's time to wash the dishes" was provided. Similar to the other two tasks, the video was paused and played by myself. This occurred until ME was able to complete these skills independently. When the target skill was completed on the video, it was paused for ME so he could complete the step himself. The video was stopped after each step of the task analysis so the target skill could be performed. Data

was recorded. Teeth brushing and making a sandwich were also probed during session 19, with data recorded.

Nine additional sessions (sessions 20-28) took place continuing to use a point of view video modeling procedure. During each additional session, all three tasks were probed at least once. Data was taken and percentages of independence were recorded. After all data was collected using a point of view modeling procedure, all data including baseline, discrete trial teaching data, and video modeling teaching data were evaluated and compared.

Variables

The independent variables were the discrete trial teaching intervention and the point of view video modeling intervention. The purpose of this study was to examine the effectiveness of implementing point of view video modeling to teach a fifteen year old boy with autism daily living skills. It was hypothesized that point of view video modeling to teach daily living skills would be more effective than discrete trial teaching or task analysis probing for teaching these skills. The dependent variable was the data obtained on the task analysis protocol for the three daily living skills; teeth brushing, making a sandwich, and doing the dishes. This data recorded was the percentage of independence at the end of all sessions, for all three daily living skills, with the goal being 100%.

Experimental Design

This was a single subject, repeated measures research design with the repeated measures being teeth brushing, making a sandwich, and doing the dishes.

Chapter 4

Results

Summary

This was a single subject, repeated measures research design with the repeated measures being teeth brushing, making a sandwich, and doing the dishes. It was hypothesized that point of view video modeling to teach daily living skills would be more effective than discrete trial teaching or task analysis probing for teaching these skills. The research question to be answered was:

1. Will the student achieve more independence with the three daily living skill tasks by the end of the point of view modeling phase, in comparison to baseline and discrete trial teaching data obtained?

Baseline data was obtained by probing all three daily living skill tasks; teeth brushing, making a sandwich, and doing the dishes. A discriminative stimulus (SD) was presented at the beginning of each task and at each subsequent step and the prompt level required was recorded. The number of steps completed independently was converted to a percentage of independence for each task. Baseline data was recorded using a task analysis protocol.

After baseline data was obtained, discrete trial teaching was used to teach the student the steps necessary to complete the three daily living skill tasks. Twelve sessions occurred during this phase, with data recorded using the task analysis protocol. Prompt level for each step was recorded, and the number of steps completed independently was converted to a percentage of independence for each task.

Point of view video modeling was then implemented. Twelve sessions occurred during this phase as well, with data recorded using the task analysis protocol. Prompt

level for each step was recorded, and the number of steps completed independently was converted to a percentage of independence for each task.

Individual Results

Figure 1 illustrates the results for teeth brushing. Figure 1 shows the percentage of independence achieved by the end of each phase for baseline, discrete trial teaching, and point of view video modeling. At the conclusion of the baseline phase the student achieved 5% independence. At the conclusion of the discrete trial teaching phase the student achieved 19% independence. The student achieved 62% independence at the conclusion of the point of view video modeling phase.

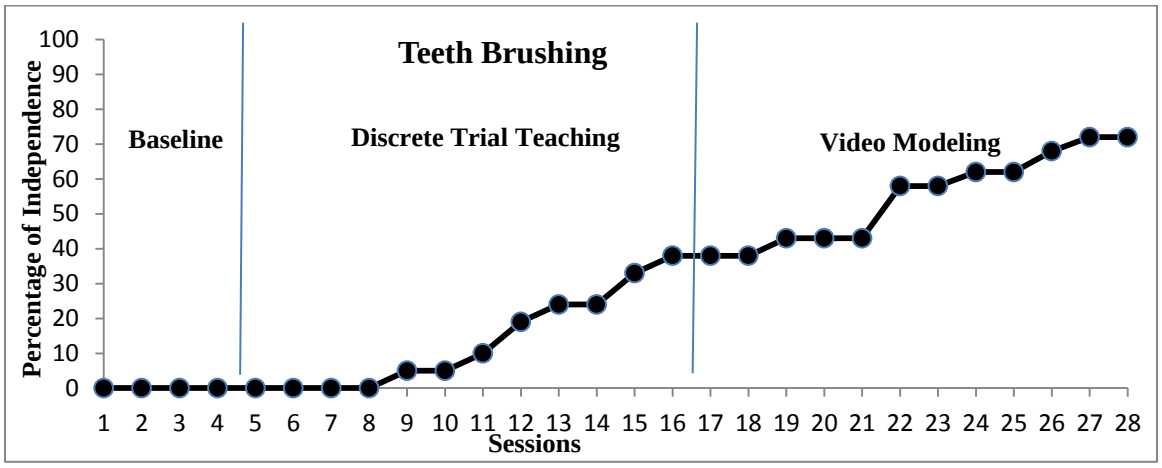

Figure 1. Teeth Brushing

Figure 2 illustrates the results for making a sandwich. Figure 2 shows the percentage of independence achieved by the end of each phase for baseline, discrete trial teaching, and point of view video modeling. At the conclusion of the baseline phase the student achieved 0% independence. At the conclusion of the discrete trial teaching phase the student achieved 24% independence. The student achieved 72% independence at the conclusion of the point of view video modeling phase.

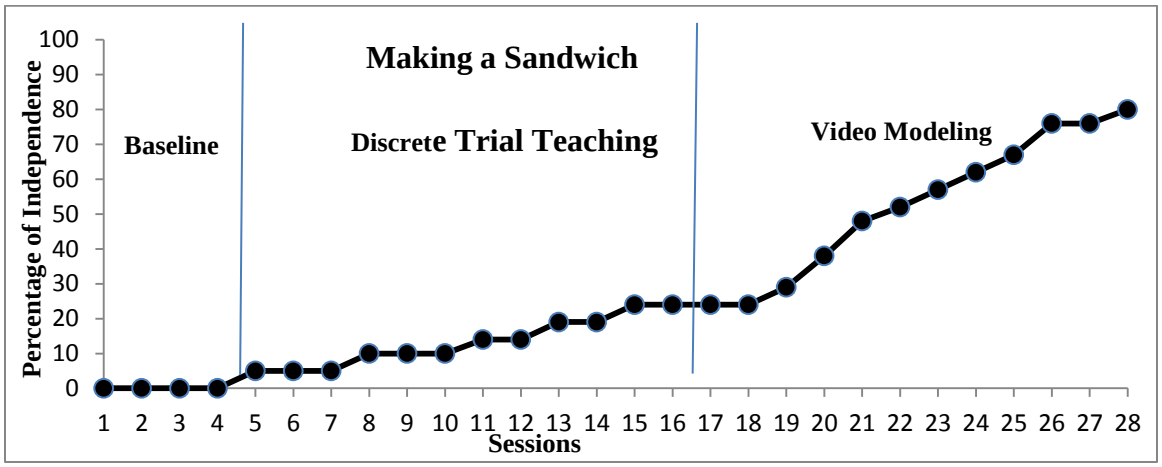

Figure 2. Making a Sandwich

Figure 3 illustrates the results for doing the dishes. Figure 3 shows the percentage of independence achieved by the end of each phase for baseline, discrete trial teaching, and point of view video modeling. At the conclusion of the baseline phase the student achieved 0% independence. At the conclusion of the discrete trial teaching phase the student achieved 24% independence. The student achieved 80% independence at the conclusion of the point of view video modeling phase.

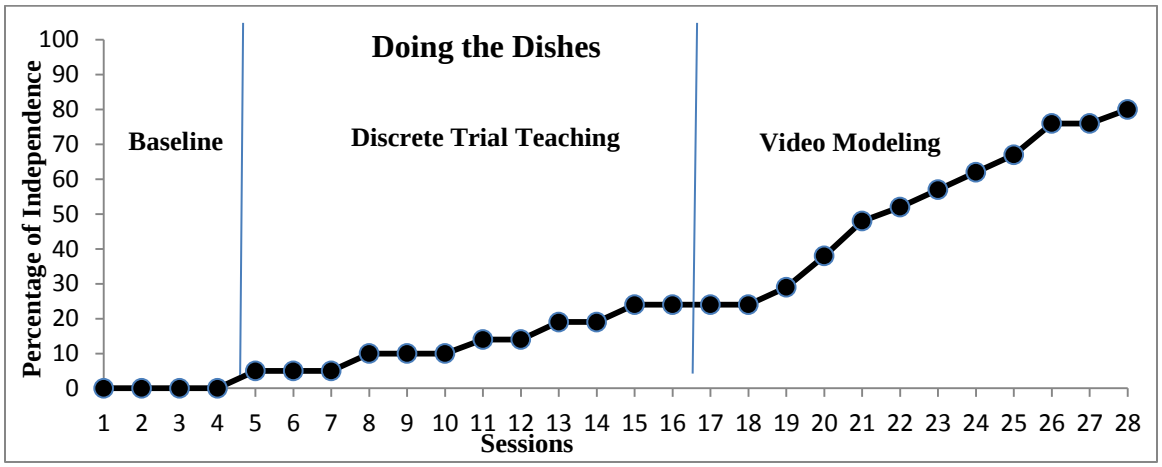

Figure 3. Doing the Dishes

Chapter 5

Discussion

This study examined the effects of implementing point of view video modeling to teach three daily living skills to a fifteen year old boy diagnosed with autism. These results were compared to the results of task analysis probing and discrete trial teaching. The three daily living skills chosen were based upon a rating scale administered to the parents previous to intervention. The three daily living skills chosen were rated as areas that the subject was most dependent on others to complete. This study took place within the subject's home while one parent was present (although not seen by the subject).

Point of view video modeling proved to be more effective than task analysis probing or discrete trial teaching to teach the three daily living skills. The first daily living skill probed was teeth brushing. At the conclusion of the baseline phase, the student achieved 5% independence. At the conclusion of the discrete trial teaching phase the student achieved 19% independence. The student achieved 62% independence at the conclusion of the point of view video modeling phase. The second daily living skill probed was making a sandwich. At the conclusion of the baseline phase the student achieved 0% independence. At the conclusion of the discrete trial teaching phase the student achieved 24% independence. The student achieved 72% independence at the conclusion of the point of view video modeling phase. The last daily living skill probed was doing the dishes. At the conclusion of the baseline phase the student achieved 0% independence. At the conclusion of the discrete trial teaching phase the student achieved 24% independence. The student achieved 80% independence at the conclusion of the point of view video modeling phase. Although discrete trial teaching showed positive

effects, point of view video modeling proved to be more effective, as evident by the increase in the percentage of independence for each daily living skill.

The results of this study are similar to the results of many other studies examining the effects of implementing video modeling to teach various skills. Cannella-Malone, Tullis, Wheaton, and Wu (2011) examined the effectiveness of point-of-view video modeling and video prompting interventions to teach six children (ages 11-13) diagnosed with autism to do laundry and wash dishes, both daily living skills. They used a multiple probe across participants with alternating treatments design. Results indicated that point-of-view video modeling proved to be effective in teaching daily living skills to the participants with autism. Video modeling also has the proven ability to decrease problem behaviors, including aggression, tantrums, and other off-task activities. Although discovered incidentally during this study, while point of view video modeling was implemented, the student engaged in fewer problem behaviors and required less frequent breaks.

Limitations

The sample size of this study was limited to only one student diagnosed with autism. In order to determine an effect size, a much larger sample would be required. The subject of this study comes from an educated family that is very involved academically. The child receives a significant number of in home therapy hours weekly. When staff is not in the home, the parents continue to follow the protocols used by the in home therapy staff. This is not the case with many students. It would be beneficial to examine these findings amongst students from different socioeconomic and ethnic backgrounds.

Practical Implications

This study examined the effectiveness of point of view video modeling to teach three daily living skills. Although this was the purpose of the study, it was discovered that the student engaged in less stereotypical behaviors and required less frequent breaks during the video modeling phase in comparison to the baseline and discrete trial teaching phases. The child was more engaged and required less prompting to complete the task. Was this due to the increase in visuals used during the video modeling phase and/or being of higher interest to the student? This is a question that could be examined in future studies. Video modeling is not only successful in teaching daily living skills, but has proved to be successful in a multitude of areas. Consistent with Bandura's (1969) social learning theory, video modeling is a versatile intervention that capitalizes on the potency of observational learning and is well suited to address the educational needs of students with autism (Delanco, 2007). Watching predominantly positive and/or successful behaviors of one's self, as opposed to negative and/or unsuccessful behaviors, is effective as it increases both attention and motivation to attend to the model behaviors and self-efficacy (Bandura, 1997).

Future Studies

Future research should look at the effects of video modeling not only on improving academic skill sets, but on behavior and engagement as well. Future research should also look at a larger sample size, including different socioeconomic and ethnic groups.

Conclusion

Implementing point of view video modeling to teach three daily living skills to a fifteen year old boy diagnosed with autism proved to be effective than task analysis probing and discrete trial training. The student completed three daily living skill tasks with increased independence with the use of point of view video modeling. The videos created can be modified as needed for future use and can be archived to check for mastery and maintenance of the taught skills. Although not a focus of the study, it was discovered that the student engaged in less stereotypical behaviors when point of view video modeling was used. This information allows for future

References

Abdullah, M., & Corbett, B.A. (2005). Video modeling: why does it work for children with autism? *Journal of Early and Intensive Behavior Intervention, 2 (1).* Retrieved from http://www.watchmelearn.com/video-modeling/research-and-expert-opinion

Ahearn, W. H., Dickson, C. A., MacDonald, R. P. F., & Martineau, M. (Feb 2015). Prerequisite skills that support learning through video modeling. *Education & Treatment of Children*, 38.1. Retrieved from http://eric.ed.gov/?id=EJ1070173

Akullian, J., & Bellini, S. (Spring 2007). A meta-analysis of video modeling and video self-modeling interventions for children and adolescents with autism spectrum disorders. *Exceptional Children*, 73 (3). Retrieved from http://ecx.sagepub.com/content/73/3/264.abstract

Anderson, A., Moore, D. W., & Shrestha, A. (2013). Using Point-Of-View Video Modeling and Forward Chaining to Teach a Functional Self-Help Skill to a Child with Autism. *Behavior Education, 22.* Retrieved from http://eric.ed.gov/?id=EJ1002346

Bennett, K. D., & Dukes, C. (Mar 2014). A systematic review of teaching daily living skills to adolescents and adults with autism spectrum disorder. *Review Journal of Autism and Developmental Disorders, 1.1.* Retrieved from http://link.springer.com/article/10.1007%2Fs40489-013-0004-3#/page-1

Delanco, Monica E. (Jan/Feb 2007). Video modeling interventions for individuals with autism. *Remedial and Special Education*, 28.1. Retrieved from http://rse.sagepub.com/content/28/1/33.abstract

Dewey, D., Larkin, D., & Summers, J. (2008). Activities of daily living in children with developmental coordination disorder: dressing, personal hygiene, and eating skills. *Human Movement Science*, 27 (2). Retrieved from http://www.sciencedirect.com/science/article/pii/S0167945708000092

Grandin, T. (2010). *Thinking in Pictures, Expanded Edition: My Life with Autism.* New York, NY: Vintage.

Shipley-Benamou, R., Lutzker, J. R., & Taubman, M. (Summer 2002). Teaching daily living skills to children with autism through instructional video modeling. *Journal of Positive Behavior Interventions, 4.3.* Retrieved from http://pbi.sagepub.com/content/4/3/166.full.pdf+html

Sigafoos, J., O'Reilly, M., & De La Cruz, B. (2007). How to use video modeling and video prompting. Austin, TX: Pro-Ed.