A parent training program combining discrete trial training and incidental teaching in the home environment

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A Parent Training Program Combining Discrete Trial Training
and Incidental Teaching in the Home Environment

by

Lindsey Jones

A thesis submitted in partial fulfillment of the requirements for the degree of
Master of Arts
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Dedication

This thesis was inspired by all of the families that I have worked with in Virginia and in Florida. I have been blessed to work with the most amazing parents under the most unexpected circumstances. I have loved working with you and your children. I have had two supervisors who became lifelong mentors to me: Mary Worley in Virginia and Janis Krempa in Florida have supplied me with wisdom in this field and continue to set the finest examples of practitioners. I decided to earn a master's degree in this field because Mary Worley suggested I do so.

This thesis is also dedicated to my family, Sam, Linda, Brian, and Katherine Jones whose unconditional love and support are beyond any value.
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A Parent Training Program Combining Discrete Trial Training and Incidental Teaching in the Home Environment

Lindsey Jones

ABSTRACT

This study examined the effects of a parent training program teaching discrete trial teaching (DTT) and incidental teaching (IT) methods using a parent training manual. Three families with children between the ages of 5-6 diagnosed with Autism Spectrum Disorder (ASD) participated. Both parents received parent training although Parent A received training from the experimenter and Parent B received training from Parent A. The parents taught their children one skill each from three categories: communication, self-care routines and a household expectation. This study sought to expand upon the literature in the realm of combining DTT and IT as well as adding the dimensions of training in home environments in a short period of time and examined the role of one parent training the other. Results showed that all of the Parent As were able to learn and apply DTT and IT in teaching their children. All Parent A’s were then able to teach Parent B’s how to use DTT and IT without additional training from the experimenter. The generalization effects of learning skills in multiple environments with different people was also examined and discussed.
Autism is a type of developmental disorder of the brain characterized by a spectrum of symptoms divided into three categories including impairments in social interactions and communication as well as repetitive patterns of behavior. There is no known cause for autism but symptoms appear before an individual is three years of age.

There are a variety of treatments and therapies for parents of children with autism to choose from including techniques used in Applied Behavior Analysis. Two techniques include Discrete Trial Training (DTT) and Incidental Teaching (IT). These techniques are frequently used by behavior analysts in interventions, but can easily be taught to parents as well. There is a rich history in research about the usage of these two methods in a variety of settings including their usage in parent training repertoires.

*Parent Training Methods*

A study by Lovaas, Koegel, Simmons, and Long (1973) was one of the first to utilize parent training in expanding the skills of their children with autism and maintaining those skills. This study took place in a center and looked at five types of behavior: echolalia, appropriate verbal, social nonverbal, self-stimulation, and appropriate play. The important aspect of this study is that the
only children who actually maintained these skills and extended upon them were
the participants whose parents received ongoing training. All the children in the
study did have improvements, but not as much as the participants with the parent
training component. Also, a follow up after 1-4 years at the conclusion of training
showed that the children whose parents had training were improving while the
children who had been institutionalized had stopped making improvements and
had regressed in some cases.

Another study by Kogel, Russo, and Rincover (1977) looked at the
possibility of designing a reliable and valid way to train children with autism. This
study worked with 11 teachers and their 12 students. For training the
researchers used training manuals, videotapes, modeling, and feedback. The
teachers, for example, were instructed to first read a training manual that
described correct and incorrect uses of five categories of behavior modification
procedures. Afterwards the teachers observed videotapes that reiterated what
the training manual contained by showing correct and incorrect uses of the same
procedures. Upon completion a teacher then attempted to teach a student a new
target behavior with a trainer observing. Every five minutes the trainer would
provide feedback to the teacher while modeling procedures that were being
performed incorrectly. Twenty-seven behaviors were highlighted for teaching.
These were divided into six categories including self-help skills, arithmetic skills,
writing skills, picture labeling, abstract language skills, and speech skills. The
results of this study showed that in the posttraining condition all 11 teachers
performed 90-100% for correct usage of the behavior modification procedures
they had been taught. This study is significant because it illustrates that it is possible to train and assess a teacher with behavior analysis procedures.

A year later a study by Koegel, Glahn, and Nieminen (1978) examined the generalization of parent training results. This study consisted of two experiments. The first focused on providing parents with a brief demonstration on teaching children with autism new behaviors. Parent behaviors were measured and consisted of presentation of the discriminative stimulus (SD), prompting, shaping, consequence use, and discrete trial implementation. Parents were able to teach those behaviors, but no generalization of new behaviors took place. This experiment also examined a training protocol with parents using general behavior modification procedures which was able to successfully teach the parents skills. The second experiment reviewed individual effects of the training programs that were generalized and made up of many different components. This experiment used videotapes to teach parents and did not have a trainer show them how to teach new behaviors to their children. The results showed that the videotape condition developed parents with more specific training.

Another study by Lovaas (1987) examined two groups of children with autism each receiving varying amounts of behavioral treatment. The first group received more than 40 hours a week of one-on-one treatment and the second group received less than 10 hours a week. Trainers and parents were both utilized to work with the children on a variety of behaviors divided up into years. The first year focused on reducing self-stimulatory behaviors and aggression.
During the second year the children were taught expressive and abstract language as well as interactive play skills. The third year brought instances of teaching emotions as well as pre-academic skills for the children. The results of this study showed that some children recovered from their extreme behaviors and most children improved significantly. It took only two years of treatment to see observable changes with the child and parent. This study allowed for two years of treatment which showed the importance of ongoing therapy for the development of skills in the participants. The question now remains whether parents can be effective acquiring skills in a shorter amount of training time.

Sheinkopf and Siegel’s study (1998) took place in the home environment under the direction of parents with the help of clinicians. This study is important not only because of the home environment, but also because of the shorter period of time used for training and implementation. The children with autism were compared with a control group of children only receiving school-based interventions. The training was based on Lovaas, Ackerman, Alexander, Firestone, Perkins, and Young (1981) and utilized a manual explaining general principles of learning, operant conditioning, and a hierarchically organized curriculum. The manual also discussed modeling therapy sessions with discrete trial formats (prompt-response-reinforcing stimulus) with prompting, generalization, and maintenance being highlighted as well. Any punishment procedures consisted of mild verbal comments. Parents had the assistance of behavior therapists who were proficient with the Lovaas training manual. Skills were highlighted and included receptive language skills, nonverbal imitation,
nonverbal problem solving, and expressive language skills. More activities such as verbal expression, social skills, play skills, and preacademic skills were added later in the study. At the completion of the study, IQ tests were administered and children in the home-based treatment had higher scores than the children in the school-based intervention with a difference of 25 points. The participants had small changes in behaviors that were considered valuable even though all participants retained their original diagnoses. The researchers concluded that home-based interventions can be successful without the direction of an academic center or company.

A study by Lerman, Swiezy, Perkins-Parks, and Roane (2000) looked at skill acquisition of parents of children with developmental disabilities. Three parents learned treatments for their children’s problematic behaviors with management strategies using written and verbal training from the researchers. The management strategy consisted of withholding attention after occurrences of inappropriate behaviors, provide verbal prompts of asking their children what they wanted if 10 seconds elapsed of no behaviors, and differential reinforcement for no occurrences of inappropriate behaviors. Parents were also trained to use instructional prompts following noncompliance with praise following compliance to the instruction. The results showed that all parents were able to learn the skills using the written and verbal teaching plus feedback from the researchers. A follow-up proved that the parents continued to demonstrate their skills with their child. This study is important because it utilizes a training format that is not financially expensive to train initial skills and then provides opportunities for
supplemental instruction from a clinician if extra help is needed. This saves the clinician from having to train for long periods of time instead of being used only if needed by a parent that needed more instruction.

That same year another study by Smith, Buch and Gamby (2000) looked at parent-directed early intervention techniques for children diagnosed with Pervasive Developmental Disorder (PDD). Six boys between the ages of 35-45 months and their parents participated. The parents recruited therapists who could provide training on how to implement the UCLA Treatment Model (Smith & Lovaas, 1998) in their own homes. The parents and their therapists then took part in 6 one-day workshops during a 3-month period that took place in their home settings. All participants and therapists were also given consultations for the following 2-3 years after the initial study. Training on the UCLA Treatment Model consisted of lecture on behavior analysis principles and procedures and direct treatment with the child by parents, therapist, and trainer. The researchers found that the parent-recruited therapists had sufficient knowledge of treatments but were less consistent with DTT procedures than the therapists who work in a clinical setting. Results showed that five of the six boys learned receptive language, nonverbal imitation, and verbal imitation quickly after treatment started but during the 2-3 year follow up only two of the six had better scores on standardized tests.

Stahmer and Gist (2001) looked at a parent education support group as an addition to an accelerated parent education program. Two groups of parents from 22 families received parent education for 12 weeks separately from one
another with one group also attending a parent education support group once a week. The parents all had children with ASD under the age of five. Training for the parents took place in a clinical setting and included instructions for presenting clear demands or questions, interspersing maintenance tasks, and the importance of child choice and shared control. Parents also learned how and when to use reinforcers. Results were measured with videos of the parents playing with their children before and after training with the frequency of vocalizations of the children being recorded. The researchers found that both groups had high higher levels of performance with the techniques but the group that attended both the parent education program and the support group increased their overall mastery of teaching techniques. Children in both groups increased their vocalizations but the children of the parents who attended both the groups had higher increases. The researchers wrote that parent mastery of procedures would naturally increase the success of accelerated programs which would then increase their children's language abilities.

A study by Seung, Ashwell, Elder and Valcante (2006) looked at the efficacy of in-home training of communication goals of children with autism with their fathers. Training consisted of individual sessions between father and trainer and used videos of the fathers with their own children. The researchers focused on expectant waiting and imitation with animation with the fathers. They found that the fathers easily learned to wait for their children to verbally communicate as well as interact with their own children verbally too. The researchers cited that
this was another example of the importance of social reciprocity between parent and child.

Another study by Ingersoll and Dvortcsak (2006) showed how parent training can make an early special education program more valuable. This study involved nine families with children ages 3-4 diagnosed with ASD. The researchers used a parent training curriculum made up of naturalistic intervention techniques to increase social communication skills in the children with ASD during daily routines. The parent training curriculum was a conglomeration of a variety of techniques divided into two categories: direct and indirect. The indirect consisted of therapies such as Responsive Teaching (Mahoney & Perales, 2005) and Floor Time (Wieder & Greenspan, 2003) and all occurred during child-directed activities. With these techniques the parents were to increase their responsivity to their own child’s behavior and learned to follow their child’s lead. Direct interventions consisted of naturalistic and behavioral interventions such as incidental teaching, milieu teaching, and Pivotal Response Training (Stahmer, 1995). The trainers also used prompting, shaping and reinforcement techniques specifically to teach social-communication skills in the children. Parent training took place in group and individual sessions over an 8-week period. Teachers were trained concurrently with the parents and used the same training model. The study did not measure actual behavior change in parent or teacher behavior but did measure knowledge and satisfaction with the teaching model using surveys at the completion of the study. Parents responded that although they were pleased with the information they learned, they were not as confident in
applying that information in their home settings. One problem with the teaching model is the amount of time it took to train parents and teachers. Only 56% of the parents participated in the entire study and each teacher needed to devote 50 hours to it.

Parent training has definitely evolved from 1973. Not only has research proved the effectiveness of behavior analysis procedures, but it has also shown that parent training programs are equally as effective in the treatment of children with developmental disabilities. Now the question is: Can parents transfer what they have learned to others?

Parents as Trainers

A study by Kaiser, Hester, Albert, and Whiteman (1995) looked at the effects of teaching trainers with no previous behavioral training to teach parents how to work with their own children with language delays. Three mothers, their children, and three novice trainers were involved in the study. Parent training consisted of meeting twice a week in a clinic setting in a play room and trainer training took place in an office setting within the same clinic. The researchers used videotapes, handouts of explanations, and graphs to teach the trainers. The researchers also had the trainers practice their skills on children who were not involved in the study. The trainers were taught to communicate accurately with the parent, role playing, provide positive and corrective feedback, and coach each parent. After training the trainers had four training sessions with a parent and child. During these trainings a researcher observed and videotaped the session to provide feedback to the trainer. The results of this study show that the
trainers were able to learn procedures from only reading, were not able to implement until they practiced and were given feedback from researchers who had already mastered the teaching techniques. Two of the three children had significant gains in learning their target behaviors. The researchers say that these results are due to specific distinctiveness of the individual families. Some parents had trouble attending to their children because of their own disabilities. However, following the training the trainers with no experience were able to train parents to teach skills to their children.

A 2005 study by Symon examined the impact of teaching pivotal response training to three families in a clinical setting. For this study the primary caregiver, child, and the trainer were all present for a five-hour period per day for five consecutive days. Using a parent education program the trainers taught pivotal response training by showing how the adult provides clear uninterrupted instruction that vary frequently and include maintenance tasks with acquisition skills. They also showed the parents how their child should have significant input in selecting the toys and activities they want to work for thus making the reward functional. Finally, they demonstrated how rewards should be given immediately to their child after correct trials. An important aspect to this study is how the trainers taught the parents how they could teach others the same procedures. At the completion of parent training with pivotal response training, the parents left the clinic setting and trained another family member independently. The results showed that the parents were very successful in transferring what they learned to
another family member and the children’s targeted behaviors improved with the parent-trained family member.

These articles have shown that it is possible for parents to learn skills and then teach those skills to others. These results also illustrate that parents who learn how to help their children will continue their children’s therapy even when a behavior analyst is not present. This has important implications for the future of the child; their parents will spend a necessary amount of time helping them acquire and maintain skills.

*Comparing and Combining DTT and IT*

Hart and Risley (1975) performed a study on incidental teaching in preschool settings. They wrote that incidental teaching was defined as a way to teach labeling and expressive language skills in a naturally occurring adult-child environment. They defined incidental teaching as any situation that is child-initiated. Hart and Risley taught 11 children compound sentences when the children requested various materials from teachers and other children. A compound sentence occurred in two conditions. The first was with adults: after a child initially asked for an item an adult presented a cue “Why?” or “What for?” and the child then explained the reason for wanting the item. The second condition was with other children: the child asks for an item and the adult says he must ask another child for the item, and the child then asks another child for the desired item. The results showed that the children’s use of compound sentences increased significantly after incidental teaching began.
Hart and Risley expanded on their previous study in 1978 to include a three-term contingency to incidental teaching for language development which incorporated the student’s initiation, consequences, and the adult’s request for elaboration. They stressed that although the adult can set up a situation they may not prompt an initiation. Hart and Risley expanded on their three-term contingency to include a process for teaching adults: focus attention, model correct answer, ask for elaboration, prompt elaboration by providing a hint, provide correct answer, and finally provide reinforcement. Not all steps are necessary all the time because they depend on what you are teaching and the situation. Hart and Risley also suggested that if corrective feedback is required from the adult, the incidental teaching session should end immediately.

Five years later a study by McGee, Krantz, Mason, and McClannahan (1983) used incidental teaching to teach receptive language skills to two children with autism who could not initiate social interactions with others. The study took place in the group home environment for both children during their meal times when the children would prepare their lunches with an adult. The results showed that both children acquired and generalized receptive language skills very quickly once incidental teaching started. The study modified the incidental teaching methods because they added a DTT component to test for generalization. This phase was not a teaching phase and served as a way to see the effects of the teaching method on the participants.

The previous studies have shown that incidental teaching is easy to use in the natural environment and functional for the child in the specific situation, but is
it preferred by parents? A study by Schreibman and Koegel (1996) found that naturalistic strategies were more enjoyable for parents. The study also commented that naturalistic strategies in general were easier and less time consuming to train in home environments. The term “naturalistic strategies” refers to those situations that take place in a natural environment, such as homes and schools, and not necessarily in a clinic. Incidental teaching can be considered a type of naturalistic strategy.

A 2005 study looked at the acquisition and generalizing effects of discrete trial teaching in a more intensive parent-training program (Crockett, Fleming, Doepke, & Stevens). Two parents were trained to teach four functional skills to their own children in a clinical setting using DTT procedures. The training consisted of a trainer giving instructions, modeling, role playing, and providing feedback. The parents were taught how to present antecedents, deliver consequences, conduct intertrial intervals, and record their child’s behavior. Training lasted for two hours a week for 6-9 sessions depending on how quickly the parent learned the repertoire. The four skills varied for each child but included attending, writing, counting, choosing, labeling, ball play, and verbal imitation. The parents were not trained how to teach each skill to their child, but were instead instructed to teach one skill at a time using their knowledge of DTT. The results showed that the parents were able to generalize the DTT methods taught to them and successfully teach their children the four skills. The researchers cited that their study could be improved upon by examining the effects of a DTT training program in a more natural setting.
A study by Steege, Mace, Perry, and Longenecker (2007) documented the many problems associated with programs that utilize only DTT methods. The authors wrote that although DTT is easy to learn, progressive, allows for numerous trials, and is adequate to develop skills, it requires more steps for generalization, has a difficult time transferring to natural environments, and may not be functional enough for most children. They recommend incorporating more methods instead of using a pure DTT program for children with autism. This leads to the question, what are the possible differences between DTT and IT?

Many studies compare the effects of DTT and IT in the acquisition and generalization of skills in children with ASD. One such study by Mirande-Linde and Melin (1992) compared the effects of DTT and IT with two boys ages 10 and 12 diagnosed with Autism. DTT and IT were used to teach color adjectives in a school environment. The results showed that DTT led to faster acquisition, but a week later during a follow-up session there was no difference in the performance of either boy between the two different methods. IT resulted in slower generalization when implemented in the home environment, but during the follow-up session yielded better results than the traditional DTT. This study is important because it shows the differences in time needed to acquire and generalize new skills.

A more recent study by Charlop-Christy and Carpenter (2000) examined modified incidental teaching sessions (MITS) against traditional incidental training and DTT. The authors wrote that MITS uses both DTT and incidental teaching in regards to acquisition and generalization. DTT by itself is credited
with rapid learning due to trial repetition and incidental teaching occurs in a natural environment. The parents of three children with autism were trained to utilize all three techniques using instruction, modeling, and feedback. The authors wrote that incidental teaching occurs in natural environments and DTT leads to rapid learning because of trial repetition. Results showed that MITS had more significant acquisition and generalization of target behaviors. Only one child acquired skills with incidental and two children acquired skills with DTT, but all acquired with MITS. No target skills were generalized with incidental teaching by itself or DTT by itself. This study is important because it shows the differences between using a DTT-only program versus an IT-only program, but its greatest strength is showing the importance of combining DTT and IT to come up with a very successful parent-training program.

Two different types of successful teaching methods are DTT and IT. Both are effective separately and, as the previous articles have shown, are effective when used together. When used separately and by itself, DTT has numerous problems including more time needed for generalization and not as functional as other methods (Steege, et. al, 2007). Also, when it is used by itself IT has slower acquisition time for skills (Mirande-Linde & Melin, 1992). When the two methods are combined, however, the Mirande-Linde and Melin study (1992) showed that skills were acquired and generalized within a reasonable amount of time.

Generalization

Generalization is an important aspect of any autism program. What is the point of teaching language and skills if the child can only use them in situation,
environment, or with one other person? An article by Stokes and Baer (1977) examined generalization by synthesizing previous literature and provided nine classifications for specific types. Those nine classifications include the following: Train and Hope, Sequential Modification, Introduce to Natural Maintaining Contingencies, Train Sufficient Exemplars, Train Loosely, Use Indiscriminable Contingencies, Program Common Stimuli, Mediate Generalization, and Train “To Generalize.”

A study in 1974 by Stokes, Baer, and Jackson was an example of Train Sufficient Exemplars by looking at increasing greeting responses in children with mental retardation to staff members. This study found that if they only used one staff member during training, the children would not generalize the learned greeting responses to the other staff members. When they added additional staff members to the training condition the children were able to generalize the greeting responses to other staff members including ones that were not present during training and were not associated with training either.

In 1989 a study by Stokes and Osnes noted the most effective generalization takes place within the same stimulus class that was present during the training phase. That article also discussed the experimental analysis process and divided it up into three working categories: exploit current functional contingencies, train diversely, and incorporate functional mediators.

There are clearly many different types of generalization that can happen as a result of a variety of factors. For example, the Koegel, Russo, and Rincover study (1977) demonstrated generalization through the training phase by using
accurate through correct treatments. Another study by Mirande-Linde and Melin (1992) looked at the generalization of skills in different environments and with different people. An important study by Crockett, Fleming, Doepke, and Stevens (2005) reviewed generalization by teaching DTT procedures and then examining their participants use of the DTT procedures to teach untaught skills directly to children. Two mothers taught their children with autism four skills: attending, writing or labeling, counting or ball play, and choosing or verbal imitation. The skills were picked by the parents and researchers depending on the child's developmental abilities. Once the skills were decided the mothers were asked to teach their children the first skill to the best of their ability. The mothers then received training consisting of six to nine 2-hour weekly sessions. Starting with a lecture about behavior principles, a videotape of examples, role-playing, and finally demonstration of the parents’ ability to work with their child using the DTT skills. The results showed that both mothers were able to take the DTT procedures they learned and teach skills to their children. In other words, the mothers were able to generalize the DTT training and teach skills to their children using DTT. Most importantly the mothers were able to extend what they learned to teach dissimilar skills. A deficit of this study was that it took place in a clinical setting instead of a more natural setting, such as the home environment. A more recent study by Naik-Polan and Budd (2009) investigated generalization of parent skills in the home setting with Parent-Child Interaction Therapy (PCIT). The researchers used a multiple baseline design to show that the four participating mothers were able to increase the quality of family interactions in
their home environment even though only three of the four had spontaneous transfer of skills. The quality of interactions was measured by the type of behavior the mothers were exhibiting which could have been types of attention, praise, or reflecting what their child had just commented.

*Family Context*

When working with families many variables need to be taken into account before developing a training program or an intervention. An article by Santarelli, Koegel, Casas, and Koegel (2001) summarized the important concepts of developing interventions that took into account different situations relating to families. One such example would be considering a family’s socioeconomic status before developing an intervention. For example, it would be inconsiderate to design a program that needed expensive computer equipment if the family could not afford to buy the equipment or maintain it properly. The article also discussed the different cultural factors that can effect a behavior plan. For instance, a family that speaks only German would need a behavior analyst or an interpreter that could adequately explain and teach them what they needed to know to help their child. The behavior plan would not be as effective if the behavior analyst was not able to communicate with the family.

Another variable that needs to be considered before training or program implementation is the actual design of the plan. An article by Gallimore, Weisner, Bernheimer, Guthrie, and Nihira (1993) emphasized the importance of taking into account the family’s daily activities and routines. The authors stressed the importance of each family being involved in the planning and implementation of
their own intervention. Like the Crockett, et al. study (2005), parents should be able to provide input about what they would like their children to learn and explain what goals they have for their child. By providing parents with opportunities to contribute in the process of helping their child, the parents will be more likely to participate in the therapy itself.

A study by Moes and Frea (2002) looked at the importance of a concept called family context when assessing and designing interventions for families. Family context includes caregiver demands, family support systems, and patterns of social interaction. Moes and Frea used information gathered from 3 families with children with autism to individualize behavior support plans for functional communication training (FCT) with family routines. The 3 mothers were taught FCT procedures through direct instruction with their child under the tutelage of trainers. The results of the study indicated that FCT can adapt well with families when considering a family’s home environment including values, belief systems, and goals.

Statement of Purpose

There is a plethora of research on parent training with children who have autism. Most research on parent training combines a variety of ABA methodologies and training techniques. Much research also exists on the characteristics of DTT and IT methodology. The most comprehensive studies on DTT and IT are those that combine them to form a more complex yet more effective autism intervention than if used separately. Regardless of the intervention type, some limitations remain including the possible results of
training parents in a natural environment with limited time. Likewise, interventions that combine DTT and IT also raise many questions on the effectiveness of parent training in home environments with a limited time frame. Therefore, this study sought to examine the possible results of a parent training protocol that combines DTT with IT using a training manual, role-plays, and feedback. Similar to the Crockett, et al. study (2005), the present study designed a parent training curriculum that not only allows parents to provide input in what skills their children will learn, but also allows for generalization of the procedures by the parents. Unlike the Crockett, et al. study (2005), the present study will take place in the home environment and will not allow the parents to observe the lead researcher work with their children. This way the generalization of the DTT and IT procedures is dependent on the training manual and role-plays.

The present study also built upon the study by Kaiser, et al. (1995) in that the Lead Researcher trained only one parent directly and that parent taught the other parent using any training materials provided by the Lead Researcher. The process of training started with the lead researcher training the first parent how to use DTT and IT procedures with two skills. The first parent then taught the first two skills out of a list of three skills requested. Once the child demonstrated adequate knowledge of the first two skills by the first parent, the first parent trained the second parent. Upon successful completion of training the second parent reviewed the first two skills and then taught a third skill that was untaught by the Lead Researcher and the first parent.
Since the present study needed to be completed in a few months it was interesting to observe whether or not the parent training program was effective enough for the parents to learn DTT and IT procedures and apply them to their children’s therapy.
Method

Participants and Settings

Three families participated. Each family had a child with a diagnosis on the autism spectrum and the presence of two parents or caregivers that lived in the home. The participating children were 5 and 6 years old with less than a year of Applied Behavior Analysis (ABA) therapy. At the time of this study each family was receiving in-home 1:1 services by the experimenter. The adults and caregivers had no discrete trial training (DTT) and little-to-no incidental teaching (IT) training.

Participant one was six years old at the time of the study with a diagnosis of PDD-NOS. He could communicate wants with 2-7 word sentences but preferred to speak with the fewest amount of words possible. He had deficits in expressive communication and social skills with peers and family members. He attended a public school in a special education classroom and had a younger sibling.

Participant two was five years old at the time of the study with a diagnosis of Autism. He could say approximately 15 words but used a Go Talk 9+ electronic device to communicate at the time of the study. He lived at home with his mother and an older sibling who acted as a parent figure for him. He attended a public school in a special education classroom.
Participant three was six years old at the time of the study with a recent diagnosis of Autism. He could communicate 1-4 word sentences for wants but had difficulty with expressive communication and making choices between preferred items. He lived at home with his parents and two siblings. His mother home schooled him at the time of this study.

The study took place in the individual home setting. Data collection for each parent took place in the same day. Observations were conducted individually with each adult while the other adult was supervising the other children elsewhere in the home or at work. Data collection for both parents took place at different times on the same day throughout the study.

For the DTT sessions a room was utilized that had few distractions (wall decorations, toys, things that make noises) with a child-sized table and two chairs that sat caddy-corner from each other. This room was the child’s bedroom for two of the participants and a computer room for the third participant. The IT sessions took place all around the inside of the house and surrounding yard, such as the foyer to the house, laundry room, kitchen, bathroom, and garage.

*Dependent Variables and Measurement*

*Parent behaviors.* The first analyzed variable was parent behaviors. The accuracy of parent behaviors were recorded while teaching their child the targeted skills. These behaviors were measured using a data sheet that utilized a check-off list for each step of the skill. These data sheets are located in Appendix A and B.
The specific parent behaviors that were measured during the duration of this study were whether or not they were following the DTT and IT formula. For DTT those behaviors were the following: parent providing a discriminative stimulus, providing a reinforcing stimulus, and making sure that an inter-trial interval took place. A discriminative stimulus was the instruction or environmental cue that the parents wanted their child to learn to respond using the desired skill. The reinforcing stimulus was a reward to motivate the child to respond and respond correctly to the discriminative stimulus given by the parent. The inter-trial interval was a brief pause (between five and 25 seconds) between consecutive trials.

For the ITT sessions, measured parent behaviors consisted of setting up the environment in a way that would encourage their child to engage in the skill, providing a discriminative stimulus or waiting for their child to engage in the skill, and providing a reinforcing stimulus upon correct completion of the desired skill.

Both the DTT and IT skills were a part of a Training Manual that not only described a formula of how to use them, but also used examples of how to use them and troubleshoot a variety of possible scenarios.

Child behaviors. Another dependent variable was the frequency of correct responses of the children to the skills their parents are teaching them. The definition of a correct response depended on the skill being taught but always involved a response that did not come from a prompt given by the adult. The skills consisted of three target areas: communicating, completing a self-care routine and a household expectation. The specific skills within these target areas
differed depending on the child’s assessments and requests from parents. This part of the study served as a collaboration between the researcher and parents to come up with the best skills for the child and his family. The communication target area had three different skills that the parents picked for their children. These were expressing daily events, greetings and making choices between food items at meal times. For the first family the skill of expressing daily events was picked for the participant because he had the capacity to communicate to his parents what he did during the school day but had not been taught and therefore was not doing so with anyone. A board with laminated picture and word cards was used to help him organize three events that happened that day. He was taught to pick at least three activities that happened that day, put them on the board in descending order, tell his parents what he did, and then answer one question about each activity. To teach this to him his first parent (Parent A) sat through an hour and fifteen minute session with the Lead Researcher using the Training Manual. The Lead Researcher and Parent A then role played how the first parent could implement the communication goal with her child in the DTT setting and the IT setting. The Lead Researcher gave corrective and positive feedback during the role-plays which lasted around 10 minutes.

For the second family the greetings skill involved the combination of a Go Talk 9+ communication device and waving. After Parent A reviewed the Training Manual with the Lead Researcher they began to role-play how to use DTT and IT and apply them to the desired skills. The participant learned to use the Go Talk 9+ to say “Hi” or “Bye” and learned to wave his hand. It was decided to teach
both the Go Talk 9+ and the waving in case the communication device was not available to the child. In those instances he could still wave to people as they were coming or going. In the DTT setting Parent A was taught through role-play how to prompt their child to push the Go Talk 9+ button when it was time to say “hi” or “bye.”

The third family chose making choices between food items as their communication goal for their child. After the first parent reviewed the Training Manual with the Lead Researcher they also role-played how to use a visual choice board of preferred food items on laminated 2in by 2in cards. The cards had Velcro on the back and were used to help the child organize what he wanted to choose for dinner. To teach this skill Parent A would pick out two choices, place them on top of the blank white choice board and then the child would verbalize what he wanted to eat.

Completing a self-care routine was defined as the preparation and/or maintenance of one’s body in regards to daily life. For the first family this skill consisted of getting dressed. The participant had to put on and take off underwear, a shirt and a pair of pants by himself without being chased down by his parents. As with the first skill set, the Parent A learned to teach this skill through role-plays and positive and corrective feedback before applying the DTT and IT situations with her child.

The second family chose putting on shoes as the self-care routine their child would learn do complete all by himself. The participant had to put on either a type of sandal or a shoe involving Velcro straps all by himself. Like the first
skill set, the first parent learned to teach this skill in DTT and IT settings after completing role plays and receiving positive and corrective feedback from the Lead Researcher.

The self-care routine the third family chose was brushing teeth. Similar to the previous skill, the first parent learned to teach their child this skill in DTT and IT settings after finishing role-plays and receiving corrective and positive feedback from the Lead Researcher.

Completing a household expectation was defined as the initiation, follow through, and completion of a task that can be done in the home environment that the parents found necessary and important for their children to be able to complete independently. These skills had to be developmentally appropriate for the child.

The first family chose sitting at the dinner table and eating dinner without leaving, standing on chair, and engaging in excessive self talk as their household expectation for all children. Unlike the previous two skill sets, the second parent had to teach this skill to their child. After the first parent taught the first two skills they trained the second parent using the Training Manual and role-playing. The second parent also was allowed to observe the first parent doing the first two skills with the child after training. When training finished the second parent had to teach the third skill to the child.

The second family chose helping with the laundry as their household expectation for all the children. Similar to the first family, the second family also had the second parent teach this skill to the child after successful completion of
training by the first parent. This skill comprised of having the child transfer wet clothes to the dryer and then taking the dry clothes and putting them away in a hall closet.

The household expectation the third family chose was feeding the family cat. The second parent taught this skill after successful completion of training by the first parent using the Training Manual and role plays. This skill consisted of taking a cup of food out of the cat food bin and dumping in into the cat bowl until full.

Data Collection and Interobserver Reliability

Data collection took place for up to 30 minutes twice a day which was a maximum of 30 minutes per parent. The DTT session consisted of between 10 and 20 trials per skill lasting 24 minutes with each skill taking around 8 minutes to complete. This data sheet is located in Appendix A. The IT session lasted up to 6 minutes. This data sheet is located in Appendix B. Data for the parents were collected as they completed individual trials. Data for the children were collected as they responded to their parents’ teaching.

During parent training another data sheet was used to determine if all aspects of the Training Manual were taught by the lead researcher to Parent A and whether or not Parent A taught the same material to Parent B. This data sheet is located in Appendix C.

The experimenter could not present for all sessions so a Flip video camera and tripod was given to all families. Sessions were videotaped using the Flip video camera so that interobserver agreement could be measured when the
Lead Researcher and research assistant could watch together. Research assistants were present for 34% of all sessions and took data simultaneously and independent of the experimenter. The interobserver agreement was obtained by dividing the number of agreement steps by the number of completed plus disagreement steps and multiplying that total times 100 for the measurable behaviors. The final IOA was 96.5%.

Social Validity

Social validity was assessed through the administering of a questionnaire to all participating parents upon completion of the study. A copy of the questionnaire is located in Appendix D. The questionnaire asked the parents about the procedures, goals, and the social importance of the effects. The experimenter was not present when parents filled out the questionnaire.

Experimental Procedures

Baseline. Baseline sessions consisted of 24 minutes twice a day. Each parent had 24 minutes and within that time limit they had eight minutes to try to teach each of the three skills. There were between 4-5 sessions a week per family. Prior to starting data collection the lead researcher asked the parent to try their best to teach a skill. Accuracy of the parents’ behaviors and frequency of correct responses of the child were both measured.

Parent Training. After baseline Parent A for each family received training with the experimenter. Training consisted of teaching the Training Manual, which incorporated lecture and role-plays in a book format. Parent A received feedback and time to receive clarification on anything pertaining to the methods being
taught. Once Parent A has demonstrated mastery of the criteria needed to teach skills using DTT and IT Parent Training ended. They kept their parent training manual and any additional notes taken.

The Training Manual itself was a compilation of teaching strategies that complemented the DTT and IT training itself. The manual started with a section describing Autism and its diagnosing criteria and followed it with a section about ABA. The ABA chapter discussed how behavior is analyzed and modified, showed the cyclical nature of behavior patterns, discussed antecedents and consequences, and gave examples of the four possible functions for behavior: gain attention, escape a situation, get something, or sensory based. Once Parent A understood the functions of behavior and could answer a series of questions and provide examples, they were ready to move on to the DTT training portion. The DTT portion started with the formula practitioners use to measure trials and then described each step. It gave tips on how to start your very first DTT session and then transition to a routine session comprised of numerous trials. The next session dealt with error corrections and was used to help parents react appropriately when their child answered incorrectly during a trial. An error correction took place if the child made an incorrect response and consisted of the parent making a model of the correct response, providing a prompt to help the child answer correctly, a switch to distract the child, and a repeat of the original discriminative stimulus (Frost & Bondy, 2003). The goal of an error correction was to correct the child through further instruction instead of relying on a reinforcing stimulus as the mode of instruction. Parent A’s had to demonstrate
through role-play that they could do an error correction before continuing to the next training portion called Prompt Fading. This section showed parents how to fade their prompts and gave examples of when to do so.

When Parent A demonstrated through role-plays that they could perform DTT sessions they were taught the IT portion of the manual. The IT section started with an explanation of what IT is and how to do it. It also provided examples of IT sessions when compared to DTT sessions. The next chapter then combined DTT and IT together and showed how you can teach one skill by starting with DTT and then progressing to IT. It emphasized the need for combining the two techniques and asked questions to test how well the parents had learned the material.

After the DTT and IT sections the manual discussed positive reinforcement and preference assessments. Parents were given a large red canvas bag as their “Reward Bag” to store a variety of potentially reinforcing items for their child. With this bag they were shown how to give preference assessments and role-played doing them (Carr, Nicolson & Higbee, 2000). This chapter was followed by techniques to motivate and maintain the child’s attention and offered some problem solving ideas to help parents troubleshoot what to do if their child would not respond or was losing interest in what they were teaching. The final chapter was a short one-page summary on ignoring junk behavior as mentioned in Latham (1994).

At the conclusion of the training manual Parent A and the experimenter reviewed the first two skill sets Parent A was going to teach the child. Parent A
was allowed to ask any final clarification questions about the skills and received positive and corrective feedback from the experimenter during role plays. All of the Parent As received one training session from the experimenter that lasted between one hour and an hour and a half, depending on the amount of follow-up or clarification questions they wanted to ask.

*Parent A: Skills 1 and 2.* Parent A taught their child Skill 1 which was expressing daily events. At the same time they taught Skill 2 which was getting dressed. Once the child demonstrated mastery of at least 80% accuracy for two consecutive sessions for both skills the phase ended.

*Training of Parent B.* Parent A then trained Parent B using the same parent-training manual. The lead researcher did not provide any feedback or training to Parent A or Parent B during this phase. Once Parent B demonstrated mastery of DTT and IT procedures their training ended. All training times lasted between one hour and one hour and a half depending on Parent Bs’ questions to Parent As.

*Parent B: Skills 1 and 2.* Parent B then reviewed Skills 1 and 2 with their child. Once the child demonstrated 80% accuracy for two consecutive sessions for both skills with Parent B this phase ended.

*Parent B: Skill 3.* Parent B then taught Skill 3 to their child. Parent A did not teach Skill 3 previously to the child. Once the child demonstrated 80% accuracy for two consecutive sessions the training of Skill 3 ended.
Parent A: Skill 3. Parent A finally reviewed Skill 3 with their child. Once the child demonstrated 80% accuracy for two or more consecutive sessions the training phase ended.

Experimental Design

A multiple baseline was used to evaluate the changes in each child and parent. Since there were three participating families all of the mothers were Parent A and all of the fathers or adult sibling were Parent B. Baseline for the first participant consisted of 4 sessions of observing Parent 1A (mother) and 1B (father) trying to teach the child the three skills. Baseline data were taken on all three skills with all three children. Baseline data were also recorded on the parents teaching performance. Once the stabilization of baseline data was established Parent 1A started training with the experimenter. Parent 1B maintained baseline until there was an effect with Parent 1A and the data for Parent 1B was stable. Once Parent 1A mastered the training criteria, they were allowed to teach Skills 1 and 2 to their child. After Skill 1 and 2 were mastered, Parent 1B started training by Parent 1A. Once Parent 1B mastered training he started to review Skills 1 and 2 with the child. Once the data showed stabilization Parent 1B moved on to teach Skill 3. Finally, after Skill 3 stabilized Parent 1A reviewed Skill 3 with their child.

Standardization of data was assessed by examining the dimensions of graphs including changes in levels and trends and looking at patterns or cycles of the data points.
After Parent 1A of the first participant mastered teaching Skills 1 and 2, Parent 2A for the second participant began training with the experimenter. When Parent 2A had successfully taught their child Skills 1 and 2, Parent 2A trained Parent 2B exactly as previously mentioned. Parent 3A (the mother of the third participant) then started parent training. The cycle continued until the completion of the study.

Therefore, experimental control was demonstrated by showing changes occurred with Parent A when training on Skills 1 and 2 began and sequentially when similar training began with Parent A in the other families, introduced sequentially. In addition, experimental control was demonstrated within a multiple baseline for the training of the generalization parent by Parent A, because those trainings were also introduced sequentially across families.

All adult participants signed informed consent forms approved by the University of South Florida’s Institutional Review Board (IRB)
Chapter Three

Results

The results for this study as indicated by Figure 1 show that when compared to baseline measures, all Parent As’ performance increased after receiving training from the experimenter. Figure 1 is a multiple baseline illustrating the performance of all three Parent A’s and demonstrates that after training was introduced their performance improved substantially. Their performance also improved with Skill 3 after Parent Bs’ taught them how to teach it. Baseline for Skill 3 continued through the intervention phase of Skills 1 and 2. Phase three is the intervention data for Skill 3 and maintenance data for Skills 1 and 2.

All Parent A’s showed an upward trend in their performance of teaching some of the skills prior to receiving parent training. Parent 1A had an upward trend in teaching the DTT condition of the self care and the communication goals. Parent 2A had an upward trend in teaching the self care goal in both DTT and IT conditions as well as the household expectation in the IT condition. Parent 3A had a continual upward trend for all of the skills. Upward trends are present, however all Parent As’ performance did not increase substantially until after receiving parent training.
Skill 3 for all Parent A’s remained variable until its teaching phase began. All of the data for all of the parents remained high during the maintenance phase of this study.

Missing data points represent sessions that parents did not record themselves working with their children either due to lack of time, sickness, or camera malfunction.
Figure 1. Multiple Baseline of Parent As for all three families
Figure 2 is a baseline graph for Parent Bs’ performances. The data shows that their performance increased after receiving instruction from Parent A’s. Parent 2B showed an upward trend in their teaching ability for most of the skills, but did not show a large increase in performance until after receiving training from Parent A. Data for Parents 1B and 3B remained variable until receiving training as well. All of the data for all of the Parent Bs’ remained high during the maintenance phase of this study.
Figure 2. Multiple Baseline of Parent Bs for all three families
Figure 3 is a multiple baseline showing child performance with Parent A’s. These data also show a large improvement in performance only after Parent A’s received training.

The first child with Parent 1A showed an upward trend in their performance of the self-care goal in the DTT condition. All of the other skills remained variable until a phase change.

The second child with Parent 2A had an upward trend with the DTT and IT conditions of the self-care goal. This child also showed an upward trend in their performance of the DTT condition of the household expectation as well.

The third child with Parent 3A displayed an upward trend with the DTT and IT conditions of the communication goal and both conditions of the self-care goal.

All of the children’s performance with the household expectation remained variable until they received training from their parents.
Figure 3. Multiple Baseline of Child Performance with Parent As
Figure 4 is a multiple baseline showing child performance with Parent B’s. Like Figure 3, these data demonstrate an obvious improvement in performance after Parent B’s were trained by Parent A’s.

The first two children showed large improvements in their performance of all skills once Parent 1B and 2B received parent training. The third child had an upward trend in their performance of the DTT and IT conditions of their communication goal and the IT condition of their self-care goal.

All of the children maintained a low performance of their third skill, the household expectation. All of the children also experienced in a large increase in their skill performance when Parent B’s received parent training.
Figure 4. Multiple Baseline of Child Performance with Parent Bs
Social Validity

Social Validity questionnaires were administered to the parents when data collection was complete. All participants found the training manual and interventions to be effective and helpful. Social Validity was rated on a 1-5 Likert type scale where a score of 1 indicated disagreement and a score of 5 indicated agreement. The results of the questionnaires were as follows: 1) The Parent Training Manual was easy to read and understand: 5. 2) My coach understood and communicated procedures and techniques effectively: 4.8. 3) The two interventions were easy to use: 4.9. 4) I would recommend a similar intervention to other parents: 4.8. 5) It is important to learn therapeutic interventions to teach my child skills: 5.0. 6) The skills learned by my child were beneficial to their development: 4.9. 7) I will continue to use these interventions with my child when a new skills needs to be taught: 5.0. 8) My child learned the skills effectively: 4.75.
Chapter Four

Discussion

This study showed that a parent training manual and role plays were effective in instructing parents how to teach their own children a variety of skills. The obtained results support previous research that showed the implementation of DTT and IT led to faster acquisition and better generalization of skills. Within the organization of a multiple baseline design, parents were systematically trained by the experimenter, worked with their children, and then trained their own spouses or adult child in a relatively short period of time.

The parents in Family 1 had the fastest time for teaching the skills and the child had the fastest acquisition time to learn the skills. The performance of all the children increased after their parents received training about how to teach them the three skills. All of the children reached mastery criteria for all the skills except the child in Family 2 who reached 70% independence with greetings. Parent A did have a faster increase in performance than Parent B, but all of the Parent Bs did reach mastery criteria within four sessions.

The results also add to the body of literature for a variety of reasons. This study showed that the training manual was effective in teaching parents how to use DTT and IT, as well as a variety of other techniques used in Applied Behavior Analysis, because the parents were able to teach a new skill that was
not introduced to them previously by the experimenter. The training from the experimenter to Parent A generalized from Parent A to Parent B. Parent B was then able to come up with a way to instruct Parent A to teach the child how to acquire the third skill.

These results are generalizable because although the three families lived in Florida at the time of the research, they had different socioeconomic statuses, work environments, occupations and number of children, and differing amounts of time to spend with their children. Some mothers worked full time, part time, or not at all. One father was not present for the majority of the child’s week and an older sibling took over the role of being a parent figure for him. Despite all these differences, the results for each family were the same.

There are also some limitations for this study. The most obvious one concerns future replication of this research. The current experimenter had a variety of experiences working with parents and training them in home settings. A future experimenter may not be as effective in parent training as the current experimenter. To replicate this research the experimenters will need to take into account cultural differences and be respectful of different socioeconomic statuses.

There was also a limit on the amount of time spent in baseline for each family. Although it would have been preferable to wait until stabilization of data occurred for all phases before starting a new phase, there were some slight upward trends at the end of baseline before parent training. While this may seem to take away from the data, most of the baseline data for Skill 3 remained
variable until Parent B started teaching the child Skill 3. Also, there were significant increases in performance for both parents and children only after receiving parent training.

A likely explanation for the upward trends is that the mothers in this study are very intelligent women. During baseline if they did something that resulted in a better response from their child, they would remember it and try it again. They would slowly add to their repertoire of behaviors because they had been told to “try and teach your son this skill.” The result was a slightly upward trend for two of the three mothers who were trying to teach their sons skills. This also happened with Parent 2B for the second child. Regardless, their performance and their children’s performance did not significantly increase until after receiving training from the experimenter.

Parents are quite capable of working with their own children. When given the necessary training and support system, they can continue an in-home Applied Behavior Analysis curriculum for their children. This study only lasted for 25 sessions, which was significantly less than expected. The Discrete Trial Training and Incidental Teaching techniques were acquired quickly by the parents and applied immediately. The parents in this study showed high motivation and a great desire to help their children learn new skills. Two of the families shared with the experimenter how they are already applying what they learned to teach new skills to their children on their own. These parents of children with Autism represent the thousands of parents in our society who want the best for their children. Parents want their children to succeed and they want
to help their children reach their goals whether they are getting dressed by themselves or communicating with their parents. There is no known cure for Pervasive Developmental Disorders or Autism, but an incredible set of tools in Applied Behavior Analysis exists that can be shared with parents to help them and their children.
References


Appendix A: Data Collection: DTT

<table>
<thead>
<tr>
<th>Trial #</th>
<th>Skill</th>
<th>SD given</th>
<th>Response</th>
<th>SR</th>
<th>Error Correction</th>
<th>ITI</th>
<th>Ignore Div./Disruptive Behavior</th>
<th>Redirection</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>F, P, V, I</td>
<td></td>
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</table>

Prompt Key: F: full physical  P: partial physical  V: verbal  I: independent
Error Correction Key: M: model  P: prompt  S: switch  R: repeat
Appendix B: Data Collection: IT

<table>
<thead>
<tr>
<th>Trial #</th>
<th>Skill</th>
<th>Environment Ready</th>
<th>SD given</th>
<th>Response F, P, V, I</th>
<th>SR</th>
<th>Error Correction</th>
<th>Ignore Diversion Behavior</th>
<th>Redirection</th>
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Prompt Key:  F: full physical  P: partial physical  V: Verbal  I: independent
Error Correction Key:  M: model  P: prompt  S: switch  R: repeat
Appendix C: Data Collection: Parent Training

Name:                                                                                                            Time Start:
Date:                                                                                                              Time Finish:

<table>
<thead>
<tr>
<th></th>
<th>Read</th>
<th>Examples</th>
<th>RP</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTT</td>
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<tr>
<td>IT</td>
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<tr>
<td>EC</td>
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<td>Both</td>
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<td>Positive R.</td>
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<td>Preference Ass.</td>
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<tr>
<td>Motivating</td>
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<tr>
<td>Ignoring Junk Behavior</td>
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<tr>
<td>Skills</td>
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</table>

EC: Error Correction
RP: role play
Appendix D: Social Validity Questionnaire for Parents

Name________________________                          Date: _________________________

Appropriateness of Procedures

<table>
<thead>
<tr>
<th>Question for Parent to Answer</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Neutral</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appropriateness of Procedures</strong></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1. The Parent Training Manual was easy to read and understand</td>
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<tr>
<td>2. My coach understood and communicated procedures and techniques effectively.</td>
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<td>3. The two interventions were easy to use.</td>
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</table>

Social Significance of Goals

<table>
<thead>
<tr>
<th>Question for Parent to Answer</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Neutral</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
</tr>
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<tbody>
<tr>
<td><strong>Social Significance of Goals</strong></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. I would recommend a similar intervention to other parents.</td>
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<td>5. It is important to learn therapeutic interventions to teach my child skills.</td>
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</table>

Social Importance of the Effects

<table>
<thead>
<tr>
<th>Question for Parent to Answer</th>
<th>Agree</th>
<th>Somewhat Agree</th>
<th>Neutral</th>
<th>Somewhat Disagree</th>
<th>Disagree</th>
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</thead>
<tbody>
<tr>
<td><strong>Social Importance of the Effects</strong></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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<tr>
<td>6. The skills learned by my child were beneficial to their development.</td>
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<td>7. I will continue to use these interventions with my child when a new skill needs to be taught.</td>
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<td>8. My child learned the skills effectively.</td>
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Appendix E: Informed Consent

Parental Permission to Participate in Research
Information for parents to consider before allowing their child to take part in this research study

IRB Study #

The following information is being presented to help you/your child decide whether or not your child wants to be a part of a research study. Please read carefully. Anything you do not understand, ask the investigator.

We are asking you to allow your child to take part in a research study that is called:
A Parent Training Program Combining Discrete Trial Training and Incidental Teaching in the Home Environment

The person who is in charge of this research study is Lindsey A. Jones. This person is called the Principal Investigator. However, other research staff may be involved and can act on behalf of the person in charge. The person explaining the research to you may be someone other than the Principal Investigator.

Other research personnel who you may be involved with include: Trevor Stokes, Ph.D., Debra Mowery, Ph.D., Mary Fuller, Ph.D., Kika Young, Krystal McFee, and Katie Kenny

The research will be done at your home.

This research is being paid for by Lindsey A. Jones

Should your child take part in this study?
This form tells you about this research study. You can decide if you want your child to take part in it. This form explains:

- Why this study is being done.
- What will happen during this study and what your child will need to do.
- Whether there is any chance your child might experience potential benefits from being in the study.
- The risks of having problems because your child is in this study.

Before you decide:

- Read this form.

IRB Number: ____________________________
IRB Consent Rev. Date: ____________________________
IC Parental Permission Template — SocBeh Rev. 2008-10-14
Informed Consent Rev #: ____________________________
- Have a friend or family member read it.
- Talk about this study with the person in charge of the study or the person explaining the study. You can have someone with you when you talk about the study.
- Talk it over with someone you trust.
- Find out what the study is about.
- You may have questions this form does not answer. You do not have to guess at things you don’t understand. If you have questions, ask the person in charge of the study or study staff as you go along. Ask them to explain things in a way you can understand.
- Take your time to think about it.

It is up to you. If you choose to let your child be in the study, then you should sign this form. If you do not want your child to take part in this study, you should not sign the form.

Why is this research being done?

The purpose of this study is to find out the efficacy of training individual parents to work with their own children using Discrete Trial Training (DTT) and Incidental Teaching (IT) methods. Parents/caregivers are taught these methods to support a parent-teaching model.

Why is your child being asked to take part?

We are asking your child to take part in this research study because he has demonstrated a development delay in the areas of social skills or communication and you have indicated a desire for parent training. We want to examine the efficacy of a parent-training program.

What will happen during this study?

Your child will be asked to spend about 2-3 months in this study. The length of time is dependent on how long it takes your child to learn the skills you want him to.

One of you will participate in a training program with Lindsey A. Jones that uses a workbook, video and role-plays to teach you how to use Discrete Trial Training (DTT) and Incidental Teaching (IT) with your child. Training will last between 2-3 hours total. You will then be asked to teach your child three skills that you would like him to learn or improve upon. These skills will be a communication skill, self-help skill and a chore. The adult that went through the initial training with Lindsey A. Jones will now show the other adult or spouse how to use DTT and IT with their child. You will be observed working with your child for a maximum of 30 minutes each time. You will record the time you spend working with your child and share it with Lindsey A. Jones to review. You will be provided the video recording device. We want to determine whether or not the parent-training program was sufficient enough to teach you how to use DTT and IT with your child.

A study visit is one your child will have with the person in charge of the study or study staff. Your child will need to participate in 30 study visits in all. Most study visits will take about thirty minutes twice a day.

Some study visits may be longer or shorter depending on which teaching scenario is being used.

Since you are videotaping yourself with your child, the study visit will consist of you working with your child on specific skills in your home environment. These study visits will take place either at a table or around your house.
At each visit, your child will be asked:

- To display the skills you want to teach them or have them improve upon. These will vary depending on what you desire your child to learn, but can include a communication goal, self-help goal and a chore. An example of a communication goal could be asking for help or communicating a want. An example of a self-help goal could be dressing themselves or brushing their teeth. An example of a chore could be putting their toys away, an after school routine, or helping with laundry. These are just examples. You will come up your own goals that are appropriate for your child.

- The final study visit will be different from previous ones because you will be asked to fill out a questionnaire to describe your level of satisfaction with the training provided to you in this study. This questionnaire will help us determine if the parent-training program was easy to learn, use and helped you teach your own child.

- You will be videotaping your interactions with your child. These videos will be viewed to see if the parent-training program is being utilized and to monitor your child’s progress with the three skills. Lindsey A. Jones, Trevor Stokes, Ph.D., Krystal McFee, Kika Young, and Katie Kenny will have access to these videos. Your personal identification will only be available to Lindsey A. Jones and Trevor Stokes, Ph.D. These videos will be destroyed at the end of the study. You may request to have copies of your own videos at the end of the study.

**How many other people will take part?**

Three families will take part in this study at USF.

**What other choices do you have if you decide not to let your child to take part?**

If you decide not to let your child take part in this study, that is okay.

Instead of being in this research study your child can choose not to participate.

**Will your child be paid for taking part in this study?**

We will not pay your child for the time he/she volunteers while being in this study.

**What will it cost you to let your child take part in this study?**

It will not cost you anything to let your child take part in the study.

The study will pay the costs of: a video camera and supplies needed for each child up to $200.

**What are the potential benefits to your child if you let him/her take part in this study?**

The potential benefits to your child are:

- Learning skills that they can use in their home environment with you and other family members.
• An ability to work with his own parents to teach him skills instead of solely relying on other professionals.

What are the risks if your child takes part in this study?
There are no known risks to those who take part in this study.

What will we do to keep your child’s study records private?
There are federal laws that say we must keep your child’s study records private. We will keep the records of this study private by only allowing access to the videotapes and data taken to Lindsey A. Jones and Trevor Stokes, Ph.D., and the research assistants: Kika Young, Krystal McFae, and Katie Kenny.

We will keep the records of this study confidential by keeping your personal identification separate from all videotapes and data. The videotapes will be destroyed at the end of the study and data will be kept in locked drawers for a period of three years.

However, certain people may need to see your child’s study records. By law, anyone who looks at your child’s records must keep them completely confidential. The only people who will be allowed to see these records are: Lindsey A. Jones and Trevor Stokes, Ph.D.

• Certain government and university people who need to know more about the study. For example, individuals who provide oversight on this study may need to look at your child’s records. These include the University of South Florida Institutional Review Board (IRB) and the staff that work for the IRB. Individuals who work for USF that provide other kinds of oversight to research studies may also need to look at your child’s records.

• Other individuals who may look at your child’s records include: agencies of the federal, state, or local government that regulates this research. This includes the Department of Health and Human Services (DHHS) and the Office for Human Research Protections. They also need to make sure that we are protecting your child’s rights and safety.

We may publish what we learn from this study. If we do, we will not let anyone know your child’s name. We will not publish anything else that would let people know who your child is.

What happens if you decide not to let your child take part in this study?
You should only let your child take part in this study if both of you want to. You or child should not feel that there is any pressure to take part in the study to please the study investigator or the research staff.

If you decide not to let your child take part:
• Your child will not be in trouble or lose any rights he/she would normally have.
• You child will still get the same services he/she would normally have.
• Your child can still get their regular in-home therapy from Lindsey A. Jones.
• You will still receive parent training from Lindsey A. Jones.

You can decide after signing this informed consent document that you no longer want your child to take part in this study. We will keep you informed of any new developments which might affect
your willingness to allow your child to continue to participate in the study. However, you can decide you want your child to stop taking part in the study for any reason at any time. If you decide you want your child to stop taking part in the study, tell the study staff as soon as you can.

- We will tell you how to stop safely. We will tell you if there are any dangers if your child stops suddenly.
- If you decide to stop, your child can go on getting his regular in-home therapy from Lindsey A. Jones. Even if you want your child to stay in the study, there may be reasons we will need to take him/her out of it. Your child may be taken out of this study if:
  - We find out it is not safe for your child to stay in the study. For example, your child’s health may get worse.
  - Your child is not present for the study visits when scheduled.

You can get the answers to your questions, concerns, or complaints.

If you have any questions, concerns or complaints about this study, call Lindsey A. Jones at 813-985-5807.

If you have questions about your child’s rights, general questions, complaints, or issues as a person taking part in this study, call the Division of Research Integrity and Compliance of the University of South Florida at (813) 974-9343.

If your child experiences an adverse event or unanticipated problem call Lindsey A. Jones at 813-985-5807 or Trevor Stokes, Ph.D. at 813-996-0193.
Consent for Child to Participate in this Research Study

It is up to you to decide whether you want your child to take part in this study. If you want your child to take part, please read the statements below and sign the form if the statements are true.

I freely give my consent to let my child take part in this study. I understand that by signing this form I am agreeing to let my child take part in research. I have received a copy of this form to take with me.

Signature of Parent of Child Taking Part in Study

Date

Printed Name of Parent of Child Taking Part in Study

Signature of Parent of Child Taking Part in Study

Date

Printed Name of Parent of Child Taking Part in Study

Signatures of both parents are required unless one parent is not reasonably available, deceased, unknown, legally incompetent, or only one parent has sole legal responsibility for the care and custody of the child. When enrolling a child participant, if only one signature is obtained, the person obtaining the consent must check one of the reasons listed below:

The signature of only one parent was obtained because:

☐ The other parent is not reasonable available. Explain: 

☐ The other parent is unknown.

☐ The other parent is legally incompetent.

☐ The parent who signed has sole legal responsibility for the care and custody of the child.

Signature of Witness

Date

Printed Name of Witness

IRB Number:

IC Parental Permission Template – SocBeh Rev: 2008-10-14

IRB Consent Rev. Date:

Informed Consent Rev #:

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Statement of Person Obtaining Informed Consent

I have carefully explained to the person taking part in the study what he or she can expect.

I hereby certify that when this person signs this form, to the best of my knowledge, he or she understands:
- What the study is about.
- What procedures/interventions/investigational drugs or devices will be used.
- What the potential benefits might be.
- What the known risks might be.

I also certify that he or she does not have any problems that could make it hard to understand what it means to take part in this research. This person speaks the language that was used to explain this research.

This person reads well enough to understand this form or, if not, this person is able to hear and understand when the form is read to him or her.

This person does not have a medical/psychological problem that would compromise comprehension and therefore makes it hard to understand what is being explained and can, therefore, give informed consent.

This person is not taking drugs that may cloud their judgment or make it hard to understand what is being explained and can, therefore, give informed consent.

___________________________________________  _______________________________________
Signature of Person Obtaining Informed Consent             Date

Printed Name of Person Obtaining Informed Consent