

THE IMPACT OF A PARENT TRAINING OPPORTUNITY FOR PARENTS OF  
CHILDREN WITH DISABILITIES ON SELF-REPORTED KNOWLEDGE AND  
SKILL LEVELS TO SUPPORT THEIR CHILDREN TO GENERALIZE BEHAVIOR

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A dissertation submitted to the Department of Educational Leadership and Policy Studies  
College of Education  
in partial fulfillment of the requirements for the degree of

Doctorate of Education  
in Special Populations

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May 2020

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## Dedication

To my loving father in heaven, Phillip Williams, I dedicate this to you. You raised me to be a strong individual and for that I'm forever grateful. You taught me that I could be anything in this world and I thank you for that. You have a forever place in my heart Daddy. I know you are proud. I miss you dearly.

## Acknowledgment

First and foremost I want to thank God for allowing me this opportunity and keeping me through the highs and lows of this journey. What a journey it was. To my amazing husband Brandon, you went through this journey with me and for that I am truly grateful for you. To my super sweet, smart baby girl Saylor, you are my everything. You gave me strength to endure the late nights and early mornings, but most importantly, regardless of the journey, you show Mommy just how much you love her unconditionally daily. I hope one day you will tell the world how much your Mommy loves you. To my mother Eva, you have been one of my biggest supporters since I could remember. You taught me and are still teaching me so many valuable things about life, you love despite of, and you are and always have been my best friend. You are my entire world.

To my family and friends, thank you. There are so many of you who have called, texted, prayed, and just been there through it all. What more could a girl ask for? Some I have not seen since I've began my journey, forgive me, but chasing a dream takes sacrifice. No matter the time a part I am forever grateful and I love each one of you dearly. To my stepfather, James, my sister Kamila, and my brother Terrance, I thank you guys for loving me pass the moon. You guys have always been in my corner. Lastly, to my Smartie Pants family (staff, parents and students) I could not have done this without you guys. You guys have given me just what I needed, when I needed, and at any given moment when it was needed. You guys inspire me.

To my committee members, thank you for being present, your support, your expertise and advice. I am forever grateful for each one of you. A special thank you to Dr. Kent for always being hands on, a call, text, or email away, and taking the time to just make things better. You are the BEST. Thank you!

## Abstract

**Background:** Lack of generalized skills across environments can lead to social, academic, and behavioral issues for students with disabilities. Further, this may also lead to more skill and performance deficiencies, leading to future concerns such as risk for dropping out. When providing an appropriate educational program, teachers and parents find problem behavior among the most challenging and stressful issues they face. Parent training allows parents to build on their prior knowledge and skills while teaching effective strategies for helping cope with their child's behaviors and for generalizing positive behaviors across different environments. **Purpose:** This study sought to assess the impact of training parents of children with disabilities on their self-reported knowledge and skill levels to support their children in generalizing behavior. The following were research questions: (a) What is the impact of a training program for parents of students with disabilities on their self-reported knowledge and skills to support generalization? (b) Are there differences in the reported knowledge and skills of parents based on parent level of education? (c) What are the differences in parent ratings of their understanding/knowledge versus their ratings of their skill to implement strategies across the categories of generalization training? **Methods:** The sample ( $n = 14$ ) included parents with children enrolled at a childcare center for children with disabilities. The outcome survey had 16 items, five relating to demographics information and eleven questions that were rated using a Likert scale. These items specifically addressed parents' self-reported knowledge and skill for implementation of strategies to support the generalization of their child's behavior following the parent training. Survey data were analyzed using the SPSS. For Research Question 1, descriptive statistics were computed for each item

assessing parents self-report of knowledge and/or skills. Additionally, correlations between each of the primary items on the outcome survey was also computed. To answer RQ2, ANOVA was conducted to determine group differences based on parent educational attainment. For RQ3, the Wilcoxon signed-rank test was utilized to examine differences between ratings of understanding/knowledge and ratings of skill to implement strategies. **Results:** Following the training, parents reported average to moderately high levels of knowledge of strategies for generalization and for managing their child's behaviors and emotions. No significant differences were found for parental education level for any items. Furthermore, the Wilcoxon signed-rank test generally showed no significant differences between ratings of understanding and rating of competence for implementation across generalization categories. However, there was a significant difference between parents' rating of understanding and competency for the category of "train to generalize". **Conclusion:** Training is likely to need to take place regularly throughout years of parental responsibility to continue to support parents in the generalization of their child's behaviors across settings. Parents need to be provided with other avenues such as real-life applications to implement these generalization strategies and/or given different training options such as online training curriculums to increase the participation. Limitations of the study include the small sample size and potential for self-report bias.

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## **Chapter I**

### **Introduction**

All individuals need to be able to generalize behaviors across situations and settings (e.g. make appropriate verbal responses in the classroom and in public). This is often learned early in life with the help of parents. Some people are better than others at generalization. Lack of generalization can impact academic, social, and behavioral performances. Students with disabilities often have greater challenges in generalization. While teachers are often formally trained in specific teaching strategies and tactics to support the generalization of a skill or behavior, parents, and more specifically, parents of students with disabilities, may not possess these specific skills and strategies to promote generalization in their children. Building the capacity of parents to help their child to generalize skills and behavior is likely to require explicit training and time. Relatedly, it is important to determine what type of training is necessary with regard to content and format. The present study specifically examines this issue.

Students with disabilities often have problems in areas such as academic achievement, social skills, and behavior due to a lack of generalization of these skills (Blumenfeld, Fredricks, & Paris, 2004). Generalization is the ability to transfer actions, concepts, or behaviors across different environments and/or settings (Osnes & Lieblein, 2003). Generalization is key in academic areas in which these students tend to struggle. Reading, writing, and mathematics are primary academic areas in which the inability to generalize skills may cause them to fall further behind to accrue more skill and performance deficiencies, and ultimately to drop out of school (Blumenfeld et al., 2004). Stokes and Baer (1977) defined generalization as “the occurrence of relevant behavior

under different, non-training conditions (i.e. across subjects, settings, people, behaviors, and/or time) without the scheduling of the same events in those conditions as had been scheduled in the training conditions” (p. 350). When teaching children with disabilities, generalization is considered one of the most important phases of learning (Peterson, 2007). The goal is to successfully apply what has been taught across environments and adapt that to a novel situation. However, generalization may not always occur naturally for students with disabilities.

Not only can a lack of generalization affect academic areas in the lives of students with disabilities but it also can have a major impact on social skills. According to Lavoie (1994), “Social skills are defined as a collection of isolated and discrete learned behaviors” (para. 3). These skills are also a major influence in a child’s academic performance, behavior, and the relationships that are critical to a successful functional life (National Association of School Psychologists, 2002). When children lack generalization in social skills, they may lack the ability to take turns, have poor listening skills, difficulty in understanding and expressing their emotions and feeling and have a deficit in interpreting and conveying spoken language. Additionally, frustrations fostered by the lack of skills become externalized in problem behaviors, which are challenging and stressful for parents (National Academies Press, 2001). Externalizing behaviors such as physical aggression, self-injury or injury to others, and even tantrums can have a major effect on a child’s social and educational development (Emerson et al., 2001). Not only can this behavior play a role in the child’s social and educational development, but it also places a challenging burden on their families. All these factors can lead students to feel incompetent and drop out of school.

The high school dropout rate in Texas, which is one third higher among students enrolled in special education classes than it is for the overall student population, reflects that reality. According to reports on secondary school completion and dropout rates (Texas Education Agency, 2016), during the 2016-2017 school year in Texas, there were 30,296 students in Grades 9-12 who dropped out of high school. This represents 1.9% of all students enrolled in those grades. According to the data, in Table 1, however, 2.6% of students with disabilities in the high school grades dropped out of school.

**Table 1**

*High School Dropouts during 2016-2017*

Students Population in Grades 9-12	Total Students Enrolled ( <i>N</i> )	Students Who Dropped Out	
		Total ( <i>n</i> )	Percentage
Texas	1,570,360	30,296	1.9
Special Education	139,054	3,667	2.6

*Note.* Data form *Enrollment in Texas Public Schools 2017-2018* by the Texas Education Agency, 2018, Austin: Author, and from *Secondary School Completion and Dropouts in Texas Public Schools 2016-2017* by the Texas Education Agency, 2018, Austin: Author. Retrieved from [https://tea.texas.gov/sites/default/files/enroll\\_2017-18.pdf](https://tea.texas.gov/sites/default/files/enroll_2017-18.pdf) and from [http://tea.texas.gov/sites/default/files/dropcomp\\_2016-17.pdf](http://tea.texas.gov/sites/default/files/dropcomp_2016-17.pdf)

**Supporting Parents**

The lack of the ability for students with disabilities to generalize behaviors across environments extends beyond the school setting. Whether the skill is an academic subject (e.g., language) or integral to social, or behavioral performance parents have a key role in supporting the development of their children. In fact, parents are considered to be the first trainers students encounter in working towards achieving expertise in their functional skills and reaching their targeted goals (Kaiser & Hancock, 2003). However, parents of students with disabilities often lack the support that is needed to assist their child in

generalizing behavior across different environments. They lack resources, training, and the support to help build upon their current knowledge and skills. However, systematic evidence over the last 30 years demonstrates that teaching parent's specific strategies to support their child's development can be effective (Kaiser & Hancock, 2003). A variety of training methods that have been shown to be effective in changing a child's behavior, including training individual parents in behavioral methods, using a group sessions to teach parents, and/or using written manuals with consultation (Barkely, 2013; Dretzke et al., 2009; Kaiser & Hancock, 2003; Kazdin, 2005; Michelson, Davenport, Dretzke, Barlow, & Day, 2003; Dickstein & Shepard, 2009). One potential concern with the above strategies is that they may conflict with a more family-centered approach to intervention. A family-centered approach to early intervention allows the family to learn about the family system and preferences (Hecimovic, Powell, & Christensen, 1999). According to Moes and Frea (2000), the family-centered approach also helps individualize services to the needs and desires of the family and allows the family to be involved in the decision-making process. However, when it comes to teaching parents specific strategies to guide the development of their child as noted above, according to Kaiser and colleagues (1996), such methods do not conflict with a family-centered method to early intervention.

Ultimately, parents benefit from needed training that can teach them a variety of strategies that can be used to address these difficulties with generalization. According to Smith et al. (2004), when effectively preparing parents to support generalization of their child's behavior while building on their prior knowledge and skills, training that emphasizes teaching the material in relevant contexts, ensuring that the information that

is being generalized is reinforced across one setting to another, and teaching the skills in multiple settings have all been successful.

### **National Context**

**Every Student Succeeds Act.** The Every Student Succeeds Act (ESSA) includes provisions that help to ensure success for all students and schools (Every Student Succeeds Act, 2015). The purpose of ESSA is to provide all children including students with disabilities significant opportunities to receive a fair, equitable, and high-quality education, and to close gaps in educational achievement between groups. Historically, students with disabilities typically do not perform as well as students without disabilities on required annual state assessments. According to the National Assessment of Education Progress (NCES, 2015), when compared with peers without disabilities, fourth-and-eighth-grade students with disabilities lag behind by more than 30 points in reading and math. However, under the ESSA, new accountability reporting requirements have put the power in the states' hands to improve results. These requirements include responsibility for developing accountability plans for low-performing districts and schools or students (including students with disabilities) failing to progress on annual statewide assessments. The ESSA not only focuses on building better accountability and closing achievement gaps for students with disabilities but also on creating a renewed and increased focus on meaningful parent and family engagement. Under ESSA, the federal government regulates states regarding the provision to parents of timely information about programs in their district, the achievement levels of the challenging state academic standards, and also the opportunity to participate in decisions relating to their child's education. The ESSA seeks to promote increased engagement of parents in their child's educational

process, while amplifying parent voices and making sure that they are included as a stakeholder in discussions that are taking place.

These ESSA provisions are important to the aims of this study because they ensure that school is accountable for providing the academic and support services that are needed in the classroom for these children with disabilities to generalize the skills taught to the assessments that each child is required to take under the ESSA. More specifically, having parents become a part of their child's educational process allows parents to support the generalization of skills with an ultimate goal of improved performance on the high-stake assessments.

**Individuals with Disabilities Education Act (IDEA).** In special education, parent participation has been a core, foundational concept since the original enactment of special education law in 1975. Key components of the original law and its most recent reauthorization in 2004 include parents' rights under due process procedures, parent participation in their child's Individualized Education Program (IEP) planning, home-school collaboration, and decision making opportunities for parents in all aspects of their child's education, including evaluation, placement, and service implementation (Trainor, 2010; Turnbull, 2001). During the 2014-2015 year, the number of students receiving services under IDEA was 6.6 million, 13% of the total number of students enrolled in public school (NCES, 2015). With the number of students receiving services, the need for support and training for parents is a necessity. IDEA also places great emphasis on involvement and progress in the general curriculum and educating students with disabilities in the least restrictive environment. This requires that IEP teams, which includes parent, must make individualized decisions about what services and supports

each student will require. This suggests that for students with disabilities to be involved in and progress in the general curriculum, achieve the goals of their IEP, and demonstrate their competencies in district and state assessments successfully, they must be able to generalize academic, behavioral, and social skills across settings.

**National Standards.** The Common Core State Standards for College and Career Readiness (CCSSs) were released in 2010 and are standards that provide a foundation for what students are expected to learn by the time they have graduated from high school in order to prepare them for college and/or workforce training programs. More specifically, the CCSSs are a set of educational standards from kindergarten to high school in the areas of what every student is expected to learn in each grade level in math and English language arts. The CCSSs were developed in 2010 by state leaders, which included governors and state commissioners of education from 48 states (National Governors Association Center for Best Practices, 2010). Currently, 44 states and the District of Columbia have adopted these standards.

Ultimately, the CCSSs help with the demanding rapidly growing global marketplace that requires students to be successfully prepared for college or properly trained to enter postsecondary training or the workforce. These standards are for all students, including students with disabilities. Thus, for students with disabilities to be prepared adequately to enter college, postsecondary training, or the workforce, they need the requisite knowledge and skills. If the goal for these students is college and career readiness, many students due to behavioral concerns may have trouble meeting these increasingly demanding standards required for postsecondary attainment.

The Career Technical Education (CTE) standards were released in 2012 and are aimed to provide all students with occupational readiness skills. The aim of the CTE is to prepare high school students for college and career readiness, which closely aligns to special education career transition goals for students with an IEP. The CTE standards were developed in 2011, and state leaders, educators, and business and industry leaders provided input and guidance. Based on 2017 and 2018 legislative activity, 372 bills were introduced in at least 46 states and the District of Columbia (Keily, 2019).

Additionally, the CTE standards ensure that all public school districts across the nation are realigning education curriculum that supports college and career readiness objectives that would help close the skills gap by training students to fill existing, in-demand jobs. This includes all students, including students with disabilities. For these students to have access to these career opportunities, requisite knowledge and skill development is needed. If the goal is to increase post-graduation job obtainment, students with behavioral issues that lack the proper strategies to cope, and the necessary knowledge and skills will be least likely to obtain and keep post-graduation employment.

### **State/Local Context**

When designing a comprehensive college and career readiness system for all students, school districts throughout the United States need to consider the challenges of students with disabilities. Student with disabilities continue to lag behind the general population in high school graduation and postsecondary completion rates (Newman Cameto, & Knokey, 2009; U.S Department of Education, 2011). According to Texas House Bill 5 in Texas (2013), starting with the 2014-2015 academic year, to receive a high school diploma, any student entering Grade 9 must complete the requirements of the

Foundation High School Program, must successfully pass the testing requirements for graduation, and must demonstrate proficiency determined by the school district in which the student is enrolled. A law passed by the Texas Legislature in 2006 mandated that the Texas Higher Education Coordinating Board and the Texas Education Agency appoint vertical teams to draft guidelines for disciplines of English/Language Arts, Science, Social Sciences, and Mathematics (Texas Higher Education Coordinating Board, 2009). The Texas Essential Knowledge and Skills (TEKS) are standards that outline what each student are to learn in each course and grade (Texas Education Agency, 2016). The TEKS are crafted to help increase students' readiness for post-secondary experiences. According to the Texas Higher Education Coordinating Board (2009), the College and Career Readiness Standards work to provide a transition to post-graduation opportunities. They also align the public school and higher education curriculum to ensure that students with disabilities are better prepared for challenging entry-level college courses or skilled workforce opportunities after graduation from high school.

The current study focuses on parents of students with disabilities who have enrolled one or more children in a childcare center within the greater Houston area. This center, which opened April 2011, specializes in childcare for children with disabilities and their siblings, ranging from 6 weeks of age to 18 years of age. The goal of the center is to provide a unique experience for the parents and children who attend. The center provides an educational learning environment that caters to the child's functional leveling of learning while providing an inviting, learning, and training environment for parents. The center provides an individual learning experience for each child that ultimately helps with their academic performance and provides support to reach achievement of the TEKS

and CTE standards: this includes such activities as homework support, hands-on functional skills training (e.g. grooming skills, folding and storing laundry, and washing and drying clothing). Additionally, the center provides parents with trainings, focused on IEPs, parent-to-parent support, and being an advocate for their children. The goal is to educate, promote, and produce successful individuals who despite their disability can become productive individuals in the community.

### **Statement of Problem**

A lack of generalized skills across environments can lead to social, academic, and behavioral issues for students with disabilities. Not only can a lack of generalized skills lead to academic issues such as limited involvement in the classroom and/or underachieving in classes but also potentially to social-emotional/behavioral issues, such as the fear of failure and lack of acceptance by peers. Further a lack of generalization may also lead to skill and performance deficiencies with taking turns, problem-solving skills, and conflict resolutions skills. All of above deficits may lead to future concerns such as increased risk for school dropping out of school. These academic and social-emotional/behavioral issues can have a negative impact on learning and motivation takes place. Parents represent a critical factor in supporting their students and thus, their specific knowledge and skills are of great significance. According to Bruner (1975), during a child's early years, parents not only assume the role of parent but also are considered a key teacher, a socializing agent, and the primary caregiver for their children. Parent training programs build on parents' prior knowledge and skills, teach them effective strategies that can be used to help cope with their child's external behaviors and introduce strategies for generalizing these behaviors across different environments.

Parents with higher levels of education tend to be more knowledgeable about their child's disability, more involved with their academic journey, and willing to invest more time in parent training. Likewise, the knowledge and skills of parents of students with various behaviors tend to differ according to each child's disability. Some behaviors of certain disabilities tend to be less aggressive than others, and some tend to be more severe and require advanced knowledge and skills. Although parent training programs have been shown to be effective in past research, no studies have directly examined training parents to aid in generalization of behavior for their students.

### **Purpose of Research**

The purpose of the present study was to determine the impact of a parent training program focused on teaching parents strategies for supporting generalization of their child's skills and behaviors across settings. Specifically, the parent training was focused on the generalization of behavior and teaching effective strategies that can be used to help promote generalization across environments. This study addressed the following research questions:

1. What is the impact of a training program for parents of students with disabilities on their self-reported knowledge and skills to support generalization?
2. Are there differences in the reported knowledge and skills of parents based on parent level of education?
3. What are the differences in parent ratings of their understanding/knowledge verse their ratings of their skill to implement strategies across the categories of generalization training?

### **Independent Variable and Dependent Variable**

In this research study the parent training, the type of disability of each child and the education of the child's parents were the independent variables. The dependent variable was the parents' self-report of knowledge and skills following the training.

*Parent training-* The educational program for parents will be a single six-hour class focused on four issues and divided into four modules:

1. The Importance of Generalization
2. Externalizing Behaviors That Affect Generalized Behavior
3. Effective Strategies for Addressing Externalizing Problems
4. Self-Regulation Strategies

*Type of disability-* The sort, nature, or class of disability of each child of the parents present at the parent training program. Some potential options are autism, Down syndrome, and learning and physical disabilities.

*Education level of child's parents-* The rank or stage at which each parent present at the parent training program ended formal schooling. Some options are some high school, high school diploma/GED, bachelor's degree, master's degree, and doctorate degree.

*Parent report of knowledge and skills-* Parents will use a outcome survey to report their knowledge and skills at the end of the parent training program. The survey will ask parents to provide a self-report on their knowledge of strategies as an impact of the training to support generalization (across the different categories) and a parent self-report of actual skill/ability in using personal knowledge of strategy.

## Chapter II

### Review of Literature

#### **Generalization**

The concept of generalization has a long history. B.F. Skinner developed and began his research on operant conditioning in the 1930's. Skinner stated that generalization is not an activity of an organism, but it is a term that describes the control that is acquired by the stimulus that is shared by other stimuli with the same effects (Skinner, 1953). Generalization is the occurrence of relevant behavior under a different, non-training condition (across subjects, settings, people, behaviors, and/or time) without the scheduling of the same events in those conditions as had been scheduled in the training conditions (Stokes & Baer, 1977). In a review of the literature, Stokes & Baer summarized nine categories of techniques to assess or to program generalization including

1. train to hope
2. sequential modification
3. introduction to natural maintaining contingencies
4. train sufficient exemplar
5. train loosely
6. use indiscriminable contingencies
7. program common stimuli
8. mediate generalization
9. train to generalize

These were meant to provide reinforcement of the behavior in multiple settings. A brief review of each of these will be provide below.

*Train and hope* is one aspect of generalization that is not explicitly a programming technique. *Train and hope* instead refers to training the individual on a desired skill or behavior and hoping that it is generalized to other setting.

Similarly, *sequential modification* is also an aspect of generalization that is not a programming technique. Sequential modification involves teaching a desired skill or behavior in one setting and observing how it is generalized in other settings. If the desired skill or behavior is not generalized in the new setting, then it is taught in the new setting until it is generalized.

*Introduction to natural maintaining contingencies* is one of the most important aspects to help students learn generalization skills in their natural environment where they will receive reinforcement. According to Stokes and Baer (1977), introduction to natural maintaining contingencies is the transfer of the behavior control from the teacher to the student using an external reward. Children with disabilities should not require a parent or teacher standing next to them ready to reinforce their behavior or skill. The behavior or skill must be rewarding to the student within their environment. A critical element in natural maintaining contingencies is that the teacher or parent reinforce instances of generalization when it occurs. Also, the student must be trained in skills that contact natural reinforcements. When teaching these skills thinking ahead to situations where the student can use the skill is important. This allows the student to generalize the skills that they have been taught in relevant situations. Additionally, modifying the contingencies in the natural environment is a critical element. If the student behaviors are

reinforced, they will occur in relevant situations, however, if these behaviors are punished or put off, they will not occur.

*Train sufficient exemplars*, or train sufficiently involves teaching new skills in many different settings, with different social partners, and in many different social contexts whether real or simulated environments. When teaching a new behavior strategy or skill, usually it is only taught with one example, which may make it hard for a child with a disability to generalize to a different situation. It is critical that these students have ample opportunities to practice these skills to ensure that when they are presented with the chance to use it, the student would do so correctly. Thus, if the student is not provided the opportunity to learn new skills in different settings, with different social partners, and in different social contexts generalization will not occur.

*Train loosely* involves teaching the desired behavior or skill that naturally occurs and identifying the teachable moments regardless of the environment or setting in which they occur. When training loosely, too much structure, routine, and scripts should be avoided so that when the individual is in a natural setting a response can be given without sounding like a script is being followed. Training loosely is teaching a desired skill or behavior in all settings and not focusing on teaching a skill in one setting and expecting it to be generalized across other environments. When training loosely, varying how the desired skill and behavior is taught is important as well. Varying the tone of your voice, changing the settings of where it is being taught, the time of the day that the desired skill or behavior is taught, using two different teachers, and the materials used to teach the desired skill and or behavior are all important elements of training loosely.

*Using indiscriminable contingencies* is an aspect of generalization utilized when the individual being taught the desired skill or behavior is not provided with a reinforcement every time the skill or behavior is presented. This allows the individual to focus on generalization the skill or behavior without focusing on the reinforcement due to the unpredictability of the response that will produce the reinforcement. Thus, this tactic has been used in many studies to show that there is a decrease in undesirable behaviors and is effective in promoting generalization.

*Program common stimuli* is an aspect in generalization whereby the individual is provided common stimuli in the training setting that is equivalent to the natural environment setting. By having familiar things in the training setting that resembles the natural environment that the desired skill or behavior will occur in, it allows the individual to generalize the behavior in a more natural approach.

*Mediating generalization* is an aspect of generalization where the individual sets a goal of practicing a newly desired skill or behavior in the natural setting and performs the skill or behavior at that time. When using mediated generalization, individuals should also be taught self-report skills. The individual will self-report what skill or behavior they will engage in, engage in the desired skill or behavior, and lastly reports back on whether the targeted skill or behavior was performed.

*Training to generalize* is an aspect of generalization where the individual is provided reinforcement response variability. When training to generalize, individuals should also be reinforced when diversity of the response is used outside the training session such as in a natural setting. Lastly, when training to generalize, reinforcement can be provided if the individual responses are completely different from the previous one.

The focus of this current study will be on training parents in the following seven facets of generalization techniques:

1. introduction to natural maintaining contingencies
2. train sufficient exemplars
3. train loosely
4. use what Stokes and Baer called “indiscriminable contingencies”
5. program common stimuli
6. mediate generalization
7. train to generalize

The categories of train and hope and sequential modification will not be addressed as they are not actual generalization programming techniques. Instead, “train and hope” has been described as “the expectation and hope that generalization will occur without the installation of any programmed techniques” (Stokes & Baer, 1977, p. 352). Further, sequential modification “is an experimental method that assesses for generalization, such as multiple baseline design, rather than a technique for generalized behavior change” (Stokes & Baer, 1977, pg. 353). A skill is trained, assessed, and if no generalized behavior change occurs, training commences for each condition until transfer of the target response is evoked (Stokes & Baer, 1977; White et al., 1988).

### **Problem Behaviors**

There are both external (outside the child) and internal (within the child) factors that can influence the behavior of children with disabilities (Clopton & Molins, 2002). External factors such as an over-stimulating environment, expectations that are extremely high or extremely low, and even changes in a child’s daily schedule by a parent or

caregiver can influence behavior. Externalizing behavior problems refers to a grouping of behavior problems that manifest in children's outward behavior and reflect the child negatively acting on the external environment (Campbell, Shaw, & Gillion, 2000; Eisenburg et al., 2001). Externalizing behavior may include aggressive behaviors such as screaming, temper tantrums, hitting, kicking, and fighting. Externalizing behaviors can also be non-aggressive in nature. Examples include lying, stealing, disobedience, destruction of property, and overactivity (hyperactivity) and also physically aggressive to themselves and others. Students that experience off-task or externalizing behaviors in the classroom are often referred to the school counselor for disciplinary actions (Abidin & Robinson, 2002).

When looking at research on externalizing behaviors in children with disabilities, the three main behaviors researched are aggression, delinquency, and hyperactivity (Campbell et al., 2000; Hinshaw, 1992). The American Psychiatric Association (2000) states that aggression is one component of conduct disorder and consists of physical or verbal behaviors that harm or threaten to harm others, including children, adults, and animals. Aggression can be classified as either appropriate and self-protective or as destructive to self and others. These behaviors tend to be seen more when the child is feeling frustrated due to his/her developmental or learning disability, or when the aggressive behavior is directly connected to an oppositional defiant disorder. These behaviors can be a result of experiencing academic failure, a disenchantment with the school, and a greater dissatisfaction with the teachers (Needham, Crosnoe, & Muller, 2004). According to Rosenbaum and Lasley (1990), a lack of attachment to teachers and weak commitment to education may ultimately lead to school failure and subsequently to

delinquency. These behaviors make it difficult to build and foster meaningful relationships with peers, teachers, and family. Lastly, hyperactivity is one of the most prevalent and frequently diagnosed disruptive behavior disorder in children with disabilities. Attention Deficit Hyperactivity Disorder (ADHD), according to the *Diagnostic and Statistical Manual of Mental Disorder*, is a behavioral condition that makes focusing on everyday requests and routines challenging (American Psychiatric Association, 2013). Children tend to have aggressive and defiant behavior that can lead them to have outbursts, reject simple requests, and become frustrated and angry due to their impulsivity. They may also have trouble focusing, staying on tasks, and are generally unorganized, easily distracted, and quite active. According to the Centers for Disease Control and Prevention (2013), approximately 11% of children from the ages of 4 to 17 years of age (6.4 million) are diagnosed with ADHD.

The aforementioned external behaviors are also known to disrupt associated outcomes such as school, family, and other societal environments (Institute of Medicine and National Research Council, 2011). In a school setting, students that demonstrate external behavior problems tend to be disruptive towards their peers and teachers. Because of their challenging behavior, they also tend to ignore teacher's instructions, argue excessively, and have frequent rule violations. A student who has difficulty performing a challenging academic task may act out in the classroom by showing behavioral concerns and/or struggles with peers (DuPaul & Weyandt, 2006). While children with disabilities, on average, tend to be two to three years behind their peers without disabilities with regards to academic performance, this rate of lag increases when external behavioral issues are also present (Cartledge & Kourea, 2008). This academic

deficit may lead to truancy, dropping out of school, or graduating without proficiency in basic reading, writing, or math skills (U.S. Department of Education, 2002). In their home and societal environments, these external behaviors can play a major role in how much families interact with the child (Institute of Medicine and National Research Council, 2011). Throwing tantrums, arguing with parents or guardians, being hostile or defiant, stealing and or threatening or causing physical harm can be some of the associated outcomes of the external behaviors that parents see both within and outside the home/societal environment (Ogundele, 2018). According to Ogundele (2018) these behaviors can lead to negative peer, parent, and sibling relationships, as well as disobeying rules leading to tantrums and physical aggression.

### **Self-Regulation Strategies for addressing problem behavior**

Interventions in which students are given the opportunity to learn and monitor their own behaviors and are shown methods on how to manage and control their own behavior are referred to as self-regulation strategies (Briesch & Chafouleaus, 2009). Self-regulation has been defined as the ability to self-asses and self-evaluate one's behavior (Reid, Trout, & Schartz, 2005). Not only does it help to manage behavior, self-regulation also helps students with disabilities learn to manage and organize their skills and use them towards learning. Learning self-regulation strategies offers students the benefits of the following: (a) being aware of what the specific target behavior is and seeing their own progress towards it; (b) providing immediate feedback for the behavior and progress; and (c) providing open communication for the parent and student to recognize the behavior/progress. According to Barkley (1990) one important component of self-regulation is a conscious appraisal of immediate past behavior. It allows the individual

the opportunity to evaluate their past behavior and change how they are going to respond to that behavior, if a change is needed. Providing constant feedback is also a critical component in self-regulation. It immediately allows the child to know what behavior is taking place now, and what behavior should be taking place. This serves as a reminder to the student to either maintain the appropriate behavior or to change the inappropriate behavior. According to Reid et al. (2005), self-monitoring, self-monitoring plus reinforcement, self-reinforcement, and self-management are the most common self-regulation processes. Even though each of these self-regulation processes can uniquely tie in and lead to the next, the overall goal is to help to empower the students to take responsibly and control of their behavior.

Agran, Bolding, Hughes, Yeager, & Wehmeyer (2003) examined the effect of self-regulation multicomponent process (antecedent cue regulation or self-monitoring with self-evaluation and self-reinforcement) with three students with developmental disabilities in general education classrooms. The three participants in this study were adolescents in Grades 7 through 9 with development disabilities who received special education services in a suburban school district in Texas (Agran et al., 2003). The study activities all took place in the general education classrooms that the students attended. A multiple baseline study was utilized across all participants with the following three research conditions in the research design: (a) baseline; (b) intervention; and (c) maintenance. The participants targeted goals were identified based on the individual student behavior and potential area of need in the general education classroom. After goals were identified and baseline data collection completed, the project research associate met with the student and teacher to design a self-regulation procedure

incorporating either self-monitoring or antecedent cue regulation plus self-evaluation and self-reinforcement (Agran et al., 2003). The findings in the study suggest that the strategies implemented were effective at improving self-regulation strategies in all the participants. The data showed that there was improvement in each participant's identified classroom behavior goal and the participant's mean and individual scores exceeded what was expected by their teachers in their goal areas.

One important element of self-regulation strategies involves self-monitoring. According to Lam et al. (1994) self-monitoring is a process where the individual will observe and record their behavior in order to change a specific target behavior. There is a two-step procedure involved in self-monitoring. The first step allows the students the chance to decide which behavior they will target based upon the severity, the frequency, and how it interferes with learning. Next, it gives the student the chance to self-report and cues the student to record their off-task behavior, task accuracy, or their task completion. The goal in the self-monitoring process is for the student to engage in more on-tasks behaviors and less off-tasks behaviors. Self-monitoring procedures can decrease reliance on external agents (e.g., teachers, parents, peers) for behavior change, thus facilitating generalization to untrained settings and maintenance of acquired skills (Krappman, McLaughlin, & Welsh, 1985).

Doepke, Hoff, & Amato-Zech (2006) examined the effectiveness of self-monitoring among three fifth-grade special education students that used the MotivAider tactile self-monitoring prompt to increase on-task behavior. The participants were students with low levels of on-task behaviors and were chosen to participate based on teacher referrals (Doepke et al., 2006). Based on teacher observations in the special

education classroom, the intervals of on-task behaviors for all participants occurred less than 55% of the time. Teachers used a 15-s partial interval recording system to collect off-task behaviors in three categories: off-task motor, off-task verbal, and off-task passive behaviors. Data was collected 15 minutes per day, two to three times a week per student. An ABAB design was used for each participant, with the third participant receiving an extended baseline (Doepke et al., 2006). The participants initial baseline observations occurred during their Reasoning, Writing, and Math classes. During the day, each student earned stamps for working on his or her personal behavioral goals, stamps that could be used at the end of the week in exchange for a small incentive. During the self-monitoring intervention all of the participants wore the MotivAider during their Reasoning and Writing instruction, which sent out electronic vibrations that helped the students cue self-monitoring. Upon completion of this study and the self-monitoring intervention, the on-task and off-task behavior of the students increased from 55% to 90% of the time. It also showed that self-monitoring when implemented in the classroom is effective for children with disabilities.

Another strategy that can be used is self-monitoring with reinforcement. Self-monitoring with reinforcement follows the same process as self-monitoring but also includes an added reward to increase continued and consistent self-assessments (Reid et al., 2005). Parents and teachers can use a token or point system as the reinforcement. This allows the student to collect and use toward a reward later that is a motivator while still providing a continued record of the progress that is being made. The goal of the added incentive is as a motivator to increase appropriate behaviors and decrease inappropriate behaviors (Zlomke & Zlomke, 2003).

One study examined three students that had difficulty with on-tasks behaviors and the differential effects that the reinforcement would have on the self-monitoring intervention (Haut & Otero, 2016). The participants nominated by their teachers, were students whose off-task behaviors interfered with their ability to function in their classroom setting: the students did not receive special education services (Haut & Otero, 2016). During the student's instruction, baseline data was recorded using a time sampling procedure to identify student's eligibility in the study. Students who were not on task for an average of 50% or more of the time were included in the study. Each student was observed for 20-minute sessions, broken down into one-minute intervals. There were five primary tools used throughout the intervention: a MotivAider, a self-monitoring recording form, a card indicting the condition, a visual image of the student engaging in the target behavior, and small rewards. Two intervention conditions were used with the students. The first condition was self-monitoring alone which allowed the student to self-monitor and self-record all on-task behaviors. During this condition, the students were not provided any verbal or tangible reinforcement (Haut & Otero, 2016). In condition two, students used self-monitoring, as in condition one, but with a reinforcement given. In condition two students were also provided immediate feedback by the investigator after the intervention period. After the intervention session, the student and investigators met to ensure accurate data and for the investigators to provide feedback and reinforcement. Based on this study, the students that performed self-monitoring received an increase in on-task behaviors when it was grouped together with the opportunity to receive a reinforcement compared to self-monitoring alone (Haut & Otero, 2016).

Students also need the opportunity to take responsibility for their own behavior. In the self-reinforcement strategy, the students set a personal goal for a change in their target behavior. Mace Belfiore, & Hutchinson (2001) states that self-reinforcement is a process where the individual controls their own behavior by rewarding themselves when they have attained a certain predetermined performance standard or criteria. As with self-monitoring with reinforcement, self-reinforcement provides feedback through self-assessment and recording of progress to show whether the target behavior has occurred or if the performance standard was reached by the student. However, self-reinforcement differs from self-monitoring with reinforcement in that during self-reinforcement, students self-award themselves a reinforcer if they determine that they reached the predetermined target behavior or criterion (Graham, Harris, & Reid, 1992). The self-award reinforcers are typically in the form of tokens and/or points and are collected or redeemed at a predetermined time with the parent or teacher. In this case, as well as the self-monitoring with reinforcement, reinforcers are used to provide an ongoing record of the student progress.

The final strategy that can be used in the self-regulation process is self-management. Self-management (also termed *self-evaluation*) requires that a person monitor, rate, and compare some aspect of his or her behavior to an external standard or criteria (Mace et al., 2001). As with self-monitoring, students are required to self-assess and record their behavior at a specific determined time. During this same time period, the parent or teacher monitors and documents the student's behavior. The only difference in the self-management strategy is it requires an additional step when evaluating the accuracy of the recorded behavior. The student and the observer, whether parent or

teacher compare the data that has been collected. If the data of the two closely matches, according to a pre-set criterion, then the student is awarded a reinforcement such as tokens or points.

In summary, teaching students with disabilities self-regulation strategies can help students improve in their academic achievement, work through challenges, and foster and maintain relationships. In this study, as parents are taught generalization techniques via the parent training program, self-regulation strategies will be emphasized that can help parents support their child's behavior and hopefully, increase the likelihood of generalization.

### **Parent Trainings**

For professionals and parents, choosing the most efficient and effective intervention strategies for children can be difficult when the parent lacks knowledge on how to work effectively with their child. According to Mohsin et al. (2011) when it comes to students with disabilities achieving target goals, the parents of these children with disabilities play a major role in the training of their functional skills. Research shows that when the intervention is chosen by the parent or caregiver, the intervention will have a direct connection with the child (Bachman, Drzal-Votruba, Nermeen, 2011). During a child's development parents support their children's language, social, and academic development (Hart & Risley, 1995). Systematic evidence over the last 30 years shows that teaching parents specific strategies has been effective in supporting their child's development (Kaiser & Hancock, 2003). All parents can learn new and effective strategies for supporting their child's development, but not every parent is ready or willing to learn new strategies at a particular point in time (Kaiser & Hancock, 2003).

According to Hancock et al. (2013), parent teaching/trainings are likely to be successful under the following conditions: (a) parents must choose to participate and make a commitment to learning the new skills; (b) parents must consider being involved in learning new skills important for their children's development; and (c) parents must have sufficient time and energy, as well as logistical support to make a relatively long-term commitment to learning and producing new skills with their children.

According to Bruner (1975), during a child's early years, parents not only assume the role of parent but are also considered a key teacher, a socializing agent, and the primary caregiver for their children. Providing explicit support and training for parents can be especially important because it allows the parent to learn the skills and build their own capacity for working with the child, helping to teach others that may work with the child, and giving the parents the knowledge and skills to bring the targeted behavior under control (Bruner, 1975). Various techniques have been used and are explored next.

**PMTO.** The Parent Management Training Oregon (PMTO) is a family intervention program that helps families use intervention strategies when dealing with children with behavioral issues. The PMTO intervention helps to decrease parent's dependence on using force and threats and empowers them to use more positive parenting strategies (Forgatch & Patterson, 2010). The PMTO focuses on five core parenting skills including, (a) skill encouragement; (b) limit setting; (c) monitoring and supervision; (d) family problem solving and (e) positive parent involvement. According to Thijssen, Vink, Muris, and Ruiters (2017), initial studies conducted in the United States have demonstrated that PMTO is an effective intervention for reducing externalizing child behavior problems. In one of the initial studies, 238 recently divorced mothers were

randomly assigned to PMTO and after 12 months, it was found that the boys in the PMTO treatment group showed lower levels of delinquency, criminal activities, and convictions (Beldavs, DeGarmo, Forgatch, & Patterson, 2009). Furthermore, according to Beldavs et al. (2005), PMTO has been shown to be effective in newly formed families consisting of biological mothers and stepfathers compared to families who did not receive an intervention. The families had to first specify family expectations and goals while also discussing issues that occur in stepfamilies. Next, family strengths, couple communication skills, and couple problem-solving skills were discussed. This is where parents learned to provide effective directives and strategies that promoted positive behavior with positive reinforcement. Lastly, monitoring of these children in settings away from the home such as school followed. This allowed parents to identify expected setbacks and challenges while helping them strategize different ways to manage them when they were on their own.

**IYTP.** Other parent trainings, such as the *Incredible Years Training Program* developed by Carolyn Webster-Stratton (2000), preceded the PMTO intervention training, yet was influenced by Patterson's research (McIntyre, 2008). The Incredible Years Training Program, is conducted in a group format using video models to train parents on targeting the parent-child interactions that will reduce negative behaviors in children. Not only does it focus on parent-child interactions and how to strengthen them and decrease negative behaviors and noncompliance with parents at home, it also helps decrease peer aggression and disruptive behaviors in the classroom (McIntyre, 2008). Another study conducted by Hutchings et al. (2016), involved a group based program for nine parents (8 mothers and 1 father) of children aged three to six years old. The program

encouraged positive relationships between the parents and their children, taught the parents how to play with their children, how to develop the social and emotional skills, and were taught some positive parental discipline practices. The outcome of this study showed overall parental satisfaction with parents reporting that the Incredible Years Training Program had an impact on their parenting, made them think about why certain behaviors were occurring, and how they responded to the behavior. There is substantial evidence demonstrating the effectiveness of the Incredible Years Training Program has had in decreasing problematic behavior in children (Hutchings et al., 2007; Webster-Stratton, Rinaldi, & Jamila, 2011) while reducing the stress and depression in these parents (Hutchings et al., 2007).

**Milieu Teaching.** The Milieu Teaching, another parent training approach, involves teaching children new forms of communication in the context of everyday language conversations (Hancock & Kaiser, 2002). The Milieu Teaching uses the following basic procedures: (a) providing a model of desired responses and correcting child responses; (b) providing a mand (a request for something wanted or needed) and then modeling/correcting if needed; (c) using a time delay and (d) employing incidental teaching strategies (Hancock & Kaiser, 2002). The first procedure of the Milieu Teaching is to model the correct responses while also directing the child's target response. The second component of the milieu therapy is the manding and modeling technique. This involves giving a direct instruction within a naturally occurring activity and context (Hancock & Kaiser, 2002). Third, time delay is often used in Milieu Therapy with the adult providing a stimulus and then waiting 5 to 30 seconds for the child-initiated response (Kaiser, 1993). The response time is based on the child's developmental and

mental age. Lastly, there is incidental teaching. Incidental teaching is a process where the communication skills are learned in unstructured situation such as free play (Hart & Risley, 1968). Effective parent trainings should not only focus on the proactive strategies that will hopefully help with the prevention of disruptive behaviors, but also should teach parents how to implement the strategies that are needed to respond to a behavior. Parent trainings are essential for providing directions and or steps that can be used effectively, learn how to implement positive reinforcements for their child, and allow parents an opportunity to understand how to use their knowledge and skills to help generalize positive behavior in different environments.

There are a plethora of studies demonstrating how Milieu Therapy has been effective in teaching communication skills to children with disabilities or communication disorders (Yoder & Warren, 2002). According to the studies, and as demonstrated in the literature, teaching students in their natural environment such as their home, school, or educational setting (Schwartz, 2003) has advantages such as generalization, helps increase vocabulary, and helps with the use of language. A study conducted by Hancock and Kaiser (2002), used a single-subject design with four participants that used the Milieu Training to assess the acquisition, maintenance, and generalization of the language and communication skills, as a result of, the intervention. The study focused on four preschool children and their mothers. The participants were diagnosed with autism by an evaluation clinic before being accepted into the study. The training sessions took place in a university-based clinic setting but also measured generalization in the home. Hancock and Kaiser (2002), were able to signify that three out of the four participants were able to use what was taught to generalize from the university setting to the home.

In summary, a variety of training methods, including directly training individual parents in behavioral procedures, teaching parents in groups, and using written manuals with limited direction consultation, have been shown to be effective in changing parent and child behavior (Kaiser, Hammeter, Ostrosky, Alpert, & Hancock, 1995).

The PMTO and the Incredible Years Training Program both share a common objective despite the delivery of the information. According to Johnson et al. (2007), the format provided in teaching parent strategies to increase positive behavior outcomes in children and program objectives must ensure that parents develop certain skills in behavior management. The parents were taught how to incorporate visual schedules, environmental manipulations, differential reinforcement, and techniques to increase the child's compliance. One of the critical aspects found in the PMTO and the Incredible Years Training Program to be embedded in the current study will be a focus on the delivery of the information and the teaching material. In this study, the information above will be used to help parents develop the knowledge and applied skills that will be needed to support generalization of their child's behavior following the training. Visual schedules, environmental manipulations, differential reinforcement, and techniques to increase each child's compliance with their parents will all be included in the parent training.

### **Conclusion**

Externalizing behaviors, such as screaming, temper tantrums, hitting, kicking, and fighting are common in children with disabilities and present a host of challenges at school and home and often lead to academic failure, a disenchantment with the school, and a greater dissatisfaction with teachers. Directly addressing these behaviors has been

shown to be effective including the teaching of self-regulation strategies as a means for controlling their own behavior (Briesch & Chafouleas, 2009), the ability to self-assess and self-evaluate one's behavior (Reid et al, 2005) and the conscious appraisal of immediate past behavior (Barkley, 1990). Effective parent training programs can help build, foster, and strengthen positive parent-child interactions (McIntyre, 2008). Additionally, parent trainings can also teach parents to serve as effective interveners for supporting their children (Bruner, 1975) while teaching children new forms of communication in the context of everyday language conversations (Hancock & Kaiser, 2002).

Finally, the principles of generalization can provide an important framework for how to address these behavior challenges and promote positive behavior for children with disabilities across settings. The focus of the present study is to provide a parent training program to assist parents in increasing and building on their knowledge and skills, in order to, become more efficient and effective in helping their children generalize behaviors in all environments. The above strategies and the principles of generalization will provide the foundation for the parent training opportunity.

## Chapter III

### Method

This research study aimed to examine the extent to which a parent training program can help build on parent's knowledge and skills to help implement the effective strategies needed to generalize positive behavior of their child with disabilities.

#### Sample

The primary participants in this study included parents from Smartie Pants Academy Center all of whom are raising children with disabilities. At the time of this study, Smartie Pants Academy Center currently had 38 children enrolled and serviced 25 families. The study had a sample of 14 parents from the 25 families connected to Smartie Pants Academy Center. Within this sample were two families raising more than one child diagnosed with a disability.

Of the fourteen parents who participated, twelve were women and two were men. The majority (64%) of the participating parents were in the age range between 34 and 44. Of the participants, seven (50%) had post-secondary degrees. Of the students represented in these families, 10 have been identified with Autism: of these, four also were reported to have an ADHD diagnosis. Of the remaining students, there was one child each with epilepsy, cerebral palsy, and intellectual disability. The mean number of children in the families was 2.14 ( $SD = 1.17$ ), with each family ranging from one to four children. Of the children represented in these families, participants reported that 10 of the children were firstborn or only child.

For this particular sample of parents, the mean rating by parents with regards to previous training received was 2.64 ( $SD = 1.15$ ) suggesting minimal to some prior training.

### **Procedure**

**Research design.** The goal of this nonexperimental research design was to determine if parent training increased parents' reported knowledge and skills for assisting their child in generalizing behaviors.

**Parent training.** Prior to participation, parents were provided a consent form to allow data from the surveys completed as a result of participating in the parent training program to be utilized for this study. The consent form included a statement of confidentiality, the study procedure, a description of the voluntary nature of participation, and the potential benefits of the study.

The parent training program was planned as face-to-face 6-hour educational session that was to be held at Smartie Pants Academy Center. A PowerPoint presentation was prepared to guide the parent training program, and copies of the presentation were made to be distributed to parents. The parent training program was created to provide the participants with a framework for developing knowledge and expanding their skillset on helping their child generalize behaviors across environments. The framework included four modules addressing the following:

1. The Importance of Generalization
2. Externalizing Behaviors That Affect Generalized Behavior
3. Effective Strategies for Addressing Externalizing Problems
4. Self-Regulation Strategies

A brief summary of each is provided below. See Appendix A for a more detailed lesson plan for the parent training.

In Module 1, *The Importance of Generalization*, the training covered seven categories of generalization defined by Stokes and Baer (1977). The presenter introduced parents to generalization and why generalization was important. The parents used a role-playing learning technique to learn these seven categories of generalization. At the completion of this module, the primary objective was for parents to be able to identify the seven categories of generalization along with strategies and techniques to use to promote generalized behavior.

In Module 2, *Externalizing Behaviors That Affect Generalized Behavior*, the presenter used a think, pair, share technique to engage the parents in a meaningful conversation on externalizing and internalizing behaviors. The presenter taught parents what externalizing and internalizing behaviors were, and provided examples of externalizing behaviors such as aggression, delinquency, and hyperactivity. At the completion of this module, parents were meant to be able to identify externalizing and internalizing behaviors.

In Module 3, *Effective Strategies for Externalizing Problems*, parents used a web organizer to address some effective strategies that can be used for externalizing problems with their child. The presenter had parents address the following questions and provide effective strategies that they would use with their child: (a) How will you choose to participate and make a commitment to learning the new skills necessary for your child's progress? (b) What commitments will you make in learning new skills important for their

children's development? and (c) How will you address each strategy and implement each in your child's life?

Lastly, in Module 4, *Self-Regulation Strategies*, presenter used the Four Corners active learning strategy to teach parents four self-regulation strategies to include, self-monitoring, self-monitoring plus reinforcement, self-reinforcement, and self-management. At the completion of this module, the goal was for parents to identify the four areas of self-regulation strategies and skills to implement the strategies with their child.

### **Measures**

**Outcome Survey.** The outcome survey was developed by the lead researcher of this study (SYHH). The outcome survey was given to each participant at the beginning of the parent training program for feedback regarding their knowledge and skills of generalizing behavior. Parents completed items 1-10 prior to the start of the training, items 11-12 at the completion of Module 1, item 13 after the completion of Module 2, and items 14-16 at the completion of the training.

The outcome survey had 16 items: five items allowed multiple-choice selections for replies to questions relating to demographic information, and eleven questions that requested replies rated using a Likert Scale. These 11 items had answer choices that varied across items. The outcome survey posed demographic questions including the age of the child, diagnosis of the child (type of disability), and the age and educational level of the parent. The questions that were rated by parents using a Likert scale assessed parents' knowledge and skills on managing their child's behavior, their knowledge of their child's disability, their confidence in their ability to help their child deal with his or

her behaviors appropriately as a result of the training, and how they would rate their child's ability to generalize their behavior strategies from one environment to another (see Appendix B for the survey).

### **Analyses**

Survey data was collected at the end of the parent training program. The data from the survey was analyzed using the Statistical Package for the Social Sciences (SPSS). The analyses occurred after the parent training program took place. Answering the first research question required that descriptive statistics be computed including the mean and standard deviations for each of the primary items on the outcome survey. Answering the second research question required conducting an analysis of the variance (ANOVA) to determine the differences between the mean ratings of the two groups based on parental education levels reported. Lastly, answering the third research question required using the Wilcoxon signed-rank test to determine any differences between parent's ratings of understanding/knowledge and their ratings of skill to implement any of the seven categories of generalization.

## Chapter IV

### Results

The purpose of this study was to conduct an analysis on the effectiveness of a training for parents of children with disabilities on their self-reported knowledge and skills related to generalization of behaviors. This chapter provides an analysis of the survey data that was collected at the completion of the parent training conducted by the researcher.

#### **Current Reported Knowledge of Sample**

On average, ( $M = 3.64$ ,  $SD = 1.08$ ), parents mean rating of their own knowledge and skills relative to managing their child's behavior indicated average to moderate knowledge and skills. Distribution of response is provided in Table 3.

When parents were asked to report their knowledge/skills relative to their child's disability, again parents reported generally average or higher knowledge and skills ( $M = 3.71$ ,  $SD = .91$ ). The majority of respondents (10/14) indicated "moderate" knowledge and skills of child's disability.

Further, a series of one-way ANOVA were conducted to compare responses from parents based on educational level. Finally, a Wilcoxon signed-rank test was run to compare differences in the reported knowledge and skills for implementation of parents based on parent level of education.

**Research Question 1. What is the impact of a training program for parents of students with disabilities on their self-reported knowledge and skills to support generalization?**

As a result of participating in Module 1 training, parents' mean rating of their child's ability to generalize behavior was 2.93 ( $SD = 1.0$ ), reflective of approximately "average" level. See Figures 1 for frequencies.

The next set of items in the survey asked the parents to report their level of understanding and knowledge of different categories of generalization of behavior after participating in Module 1. Across all seven categories, mean values were fairly consistent, ranging from an average of 3.50 to 3.79. Results are provided in Table 2 and Figure 1.

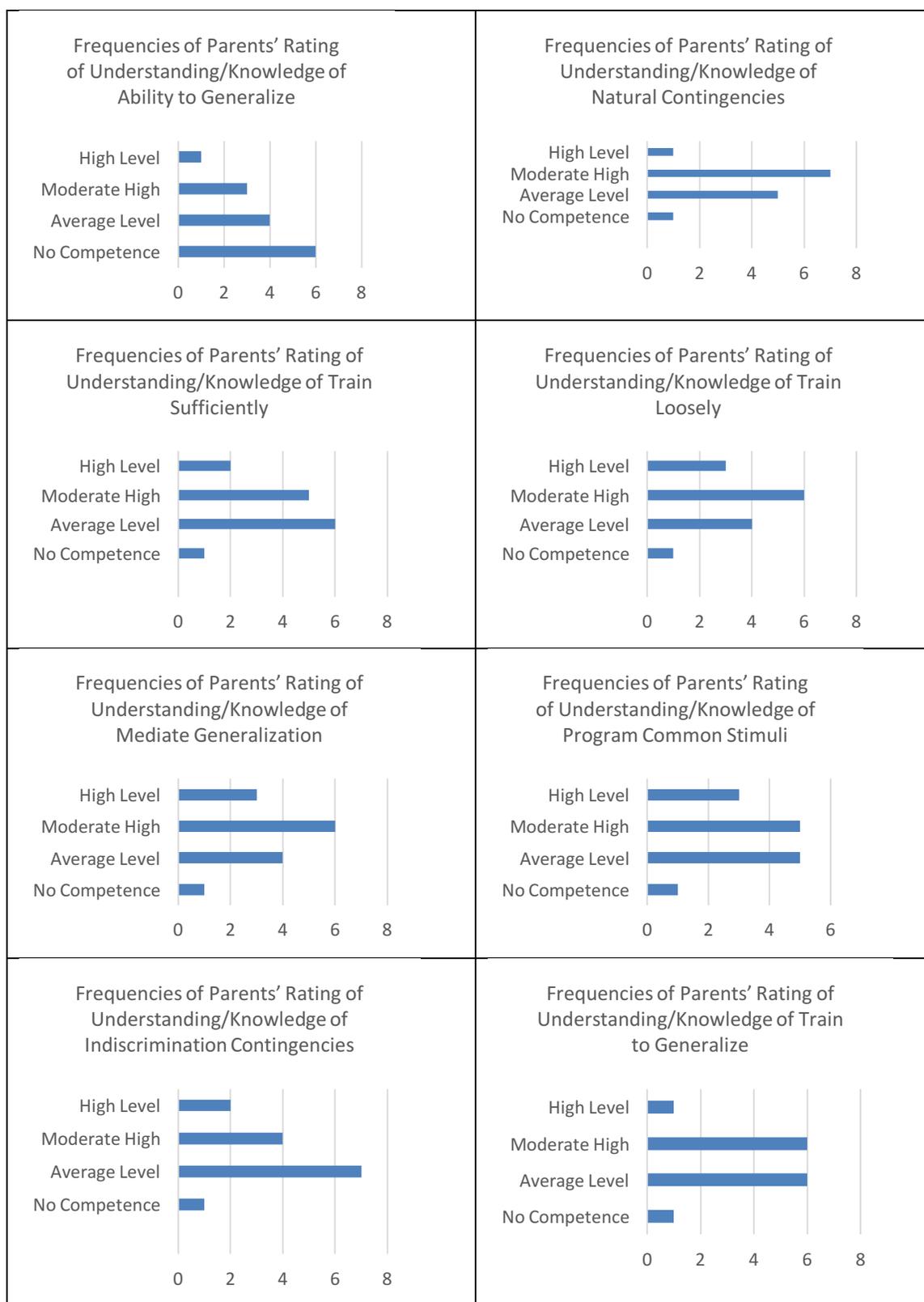
**Table 2**

*Parents Self-Reported Understanding of Generalization Categories*

Categories of Generalization	Mean	SD
Natural Contingencies	3.50	.94
Train Sufficiently	3.57	.86
Train Loosely	3.79	.90
Indiscriminable Contingencies	3.50	.86
Program Common Stimuli	3.71	.91
Mediate Generalization	3.79	.90
Train to Generalize	3.50	.76

*Note.* Scale ranged from 1-5

As a result of participating in the Module 2 training, the majority (57%) of parents reported a moderately high level of competency in identifying/describing externalizing behaviors exhibited by their child. The mean self-report rating was 4.0 ( $SD = .68$ ). See Figure 2 for frequencies of responses.



*Figure 1.* Frequency measures from Module 1 of child's ability to generalize behavior and parent's self-report of understanding/knowledge across the seven categories of generalization.

The next set of items in the survey asked parents their level of skills/ability (i.e., competence) to implement different categories of generalization of behavior after participating in Modules 3-4. Across all seven categories, mean ratings were fairly consistent, ranging from an average of 3.71 to 4.00. Results are summarized in Table 3 and Figure 2.

The final two items on the survey asked parents to report their level of confidence in using strategies addressed during training to help manage their child's emotions and behaviors. In terms of emotions, the mean rating from parents was 4.0 ( $SD = .56$ ) and for behavior was 4.07 ( $SD = .62$ ). These ratings indicated parents felt competent in using strategies to address both. For both items, two parents (14%) expressed uncertainty in their competence level. See Figure 3 for frequencies of responses.

**Table 3**

*Parents Level of Competence to Implement Generalization Strategies*

Categories of Generalization	Mean	SD
Natural Contingencies	3.71	.72
Train Sufficiently	3.71	.72
Train Loosely	3.86	.66
Indiscriminable Contingencies	3.86	.77
Program Common Stimuli	3.93	.62
Mediate Generalization	4.00	.68
Train to Generalize	3.07	.62

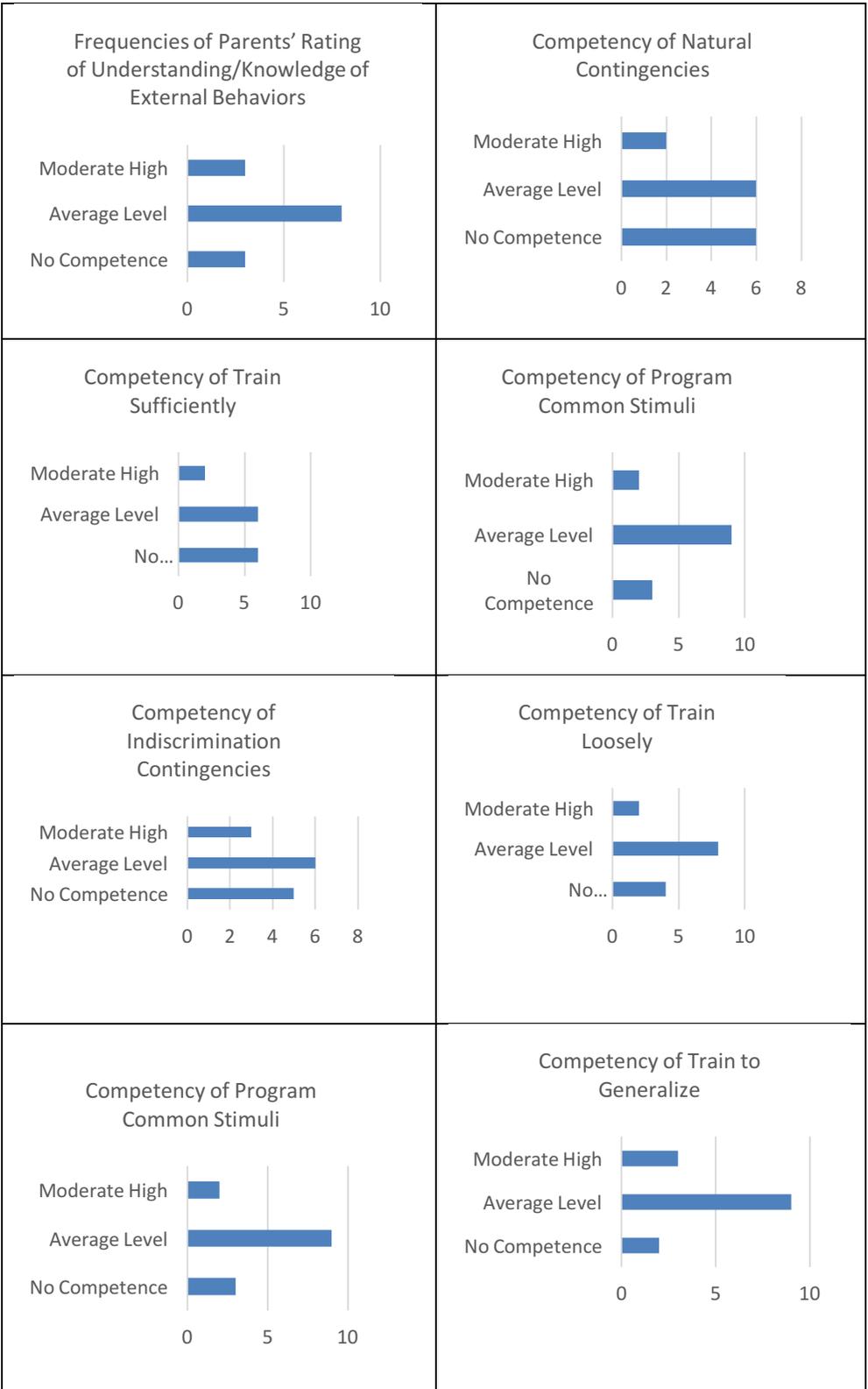
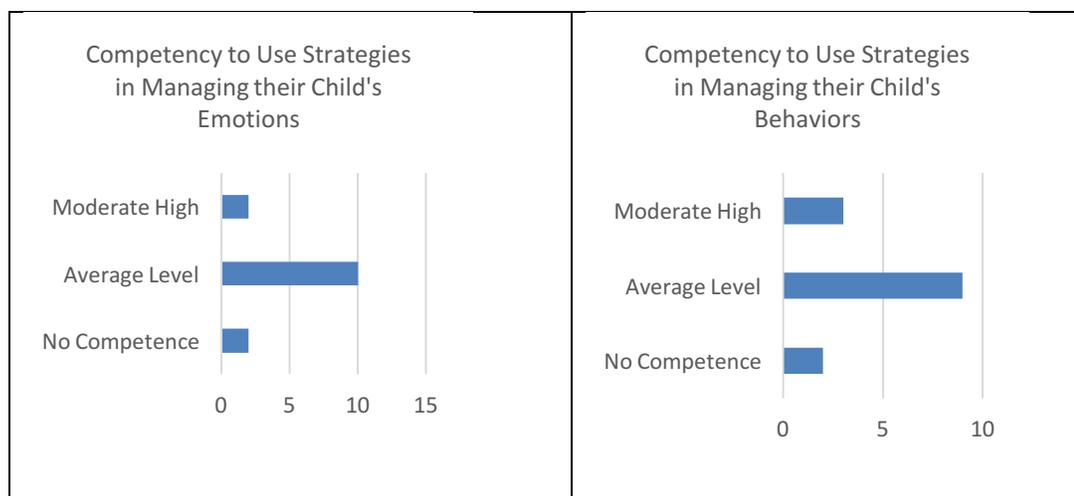


Figure 2. Frequency measures from Module 3-4 of parent's self-report of competency across the seven categories of generalization.



*Figure 3.* Frequency measures on parent's self-reported competency on using strategies in managing their child's behaviors/emotions

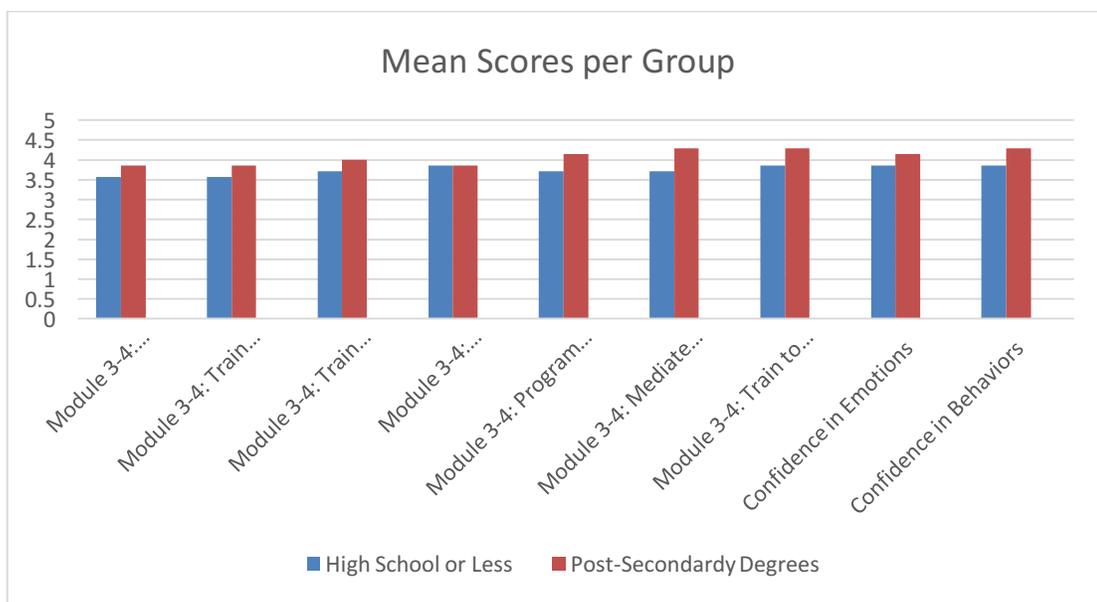
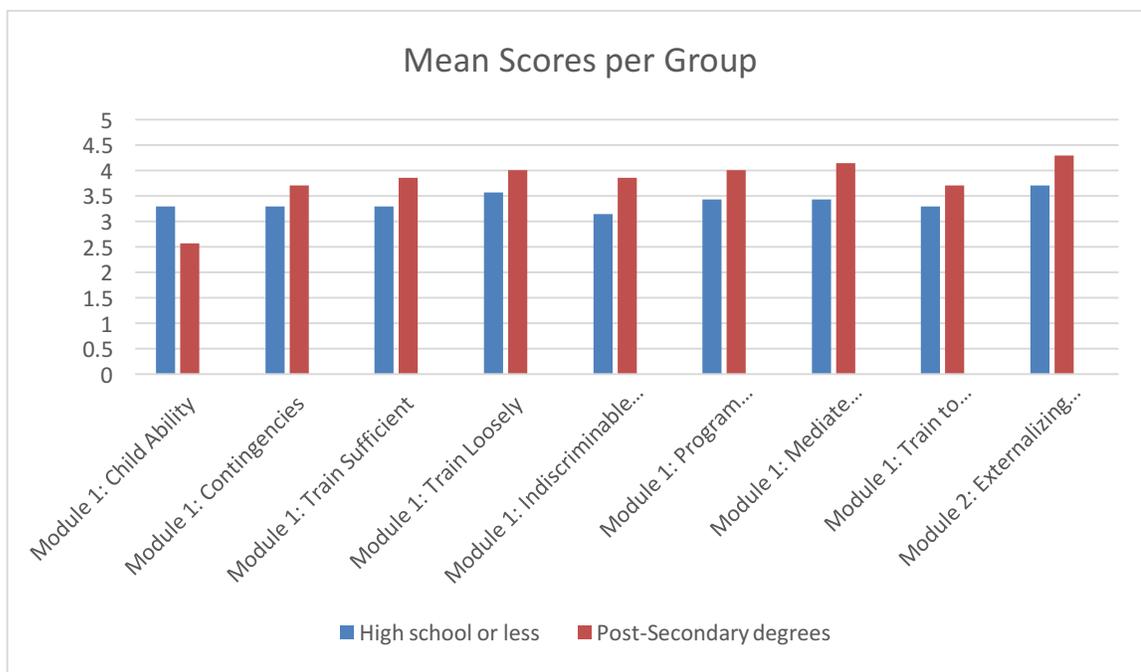
**Research Question 2. Are there differences in the reported knowledge and skills of parents based on the parents' level of education?**

A series of one-way ANOVAs were conducted to compare the differences on survey items completed following parent training between two groups based on parental education levels (Group 1 = high school or less vs. Group 2 = post-secondary degree). As noted, 50% of this sample had post-secondary degrees. No significant differences between the groups were found for any items ( $p$  values  $> .12$ ). Results are provided in Table 4 and in Figure 4.

**Table 4***ANOVA comparing parent self-reported based on educational level*

Survey Item	Group 1 Mean ( <i>SD</i> )	Group 2 Mean ( <i>SD</i> )	F	<i>p</i> - value
Module 1: Contingencies	3.29 (1.3)	3.71 (.49)	.71	.42
Module 1: Train Sufficiently	3.29 (.95)	3.86 (.69)	1.65	.22
Module 1: Train Loosely	3.57 (1.1)	4.00 (.58)	.80	.39
Module 1: Indiscriminable Contingencies	3.14 (.90)	3.86 (.69)	2.77	.12
Module 1: Program Common Stimuli	3.43 (.98)	4.00 (.82)	1.41	.26
Module 1: Mediate Generalization	3.43 (.98)	4.14 (.69)	2.50	.14
Module 1: Train to “Generalize”	3.29 (.95)	3.71 (.49)	1.12	.31
Module 2: Externalizing Behavior	3.71 (.76)	4.29 (.45)	2.82	.12
Modules 3-4: Contingencies	3.57 (.79)	3.86 (.69)	.52	.48
Modules 3-4: Train Sufficiently	3.57 (.79)	3.86 (.69)	.52	.48
Modules 3-4: Train Loosely	3.71 (.76)	4.00 (.58)	.63	.44
Modules 3-4: Indiscriminable Contingencies	3.86 (.90)	3.86 (.69)	.00	1.00
Modules 3-4: Program Common Stimuli	3.71 (.76)	4.14 (.38)	1.80	.21
Modules 3-4: Mediate Generalization	3.71 (.76)	4.29 (.49)	2.82	.12
Modules 3-4: Train to “Generalize”	3.86 (.69)	4.29 (.49)	1.80	.21
Confidence in Strategies: Emotions	3.86 (.69)	4.14 (.38)	.92	.36
Confidence in Strategies: Behaviors	3.86 (.69)	4.29 (.49)	1.80	.21

*Note:* Group 1 = educational level of high school or less group; group 2 = educational level of postsecondary degrees.



*Figure 4.* Comparison of exit survey item mean scores by educational level of parents. Scores for questions in Modules 1 and 2 (*top*) and Modules 3 and 4 (*bottom*) are reported for parents whose education ended at high school graduation or before (*blue*) and parents whose education ended with postsecondary degrees (*red*). Survey questions are included in Appendix B.

**Research Question 3. Differences in parent rating of their understanding/knowledge versus ratings of their skill to implement strategies across the categories of generalization training.**

The final analysis involved comparing parental rating of understanding and knowledge verse their perceived levels of competence for the seven categories of generalization as a result of the training. Results from these analyses are summarized in Table 5.

**Table 5**

*Differences in Self-Reported Parent Rating to Implement Strategies*

Generalization Strategy	Negative Ranks	Positive Ranks	Ties	Z (p value)
Natural Contingencies	1	3	10	-1.13 (.26)
Train Sufficiently	2	3	9	-.71 (.48)
Train Loosely	4	5	5	-.33 (.74)
Indiscrimination Contingencies	1	4	9	-1.51 (.13)
Program Common Stimuli	2	5	7	-1.13 (.26)
Mediate Generalization	1	4	9	-1.34 (.26)
Train to Generalize	0	7	7	-2.53 (.01)

*Note:* Negative ranks = rating of understanding/knowledge was higher than competency; positive ranks = rating of competency was higher than knowledge/skills.

**Natural contingencies.** Findings showed that as a result of the training, 10 of 14 parents rated skills for implementation the same as their understanding of natural contingencies, one ranked understanding higher and three rated competencies as higher than understanding. The results from the Wilcoxon signed-rank test showed that there was no significant difference between ratings of understanding and skills for implementation for this category ( $Z = 1.13$ ;  $p = .26$ ).

**Train sufficiently.** Findings demonstrated that after participating in training session, 9 of 14 parents rated their skills for implementation the same as their

understanding of train sufficiently category, two ranked understanding higher and three rated competency as higher than understanding. The results from the Wilcoxon signed-rank test showed that there was no significant difference between parent rating for these items ( $Z = -.70$ ;  $p = .48$ ).

**Train loosely.** As a result of the parent training, results indicated that 5 of 14 parents ranked skills for implementation the same as their understanding of train loosely, four ranked understanding higher and five rated competency as higher than understanding. The results from the Wilcoxon signed-rank test showed that there was no significant difference between ratings of understanding and skills for implementation this item ( $Z = -.34$ ;  $p = .74$ ).

**Indiscriminable contingencies.** Findings demonstrated that following participating in the training session, 9 of 14 parents ranked skills the same as their understanding of indiscriminable contingencies, one ranked understanding higher and four rated competency (skills) as higher than understanding. The results from the Wilcoxon signed-rank test showed that there was no significant difference between ratings of understanding and skills for this item ( $Z = -1.52$ ;  $p = .13$ ).

**Program Common Stimuli.** As a result of the training, 7 of 14 parents ranked skills for implementation the same as their understanding of program common stimuli, two ranked understanding higher, and five rated skills higher than understanding. The results from the Wilcoxon signed-rank test showed that there was no significant difference between ratings on these items ( $Z = -1.13$ ;  $p = .26$ ).

**Mediate Generalization.** Findings showed that after the training session 9 of 14 parents ranked skills the same as their understanding of mediate generalization, one

ranked understanding higher and four rated competency skills (i.e. competency) as higher than understanding. The results from the Wilcoxon signed-rank test showed that there was no significant difference ( $Z = -1.34, p = 1.80$ ) between parents' rating of understanding of this category after Module 1 and their reported competency after Modules 3 - 4.

**Train to generalize.** Findings demonstrated that as a result of the training, 7 of 14 parents ranked competency the same as their understanding of train to generalize, seven rated competency as higher than understanding. The results from the Wilcoxon signed-rank test showed there was a significant difference ( $Z = -2.53, p = .011$ ) between parents' rating of understanding of this category after Module 1 and their reported competency after Modules 3 - 4. Specifically, ratings of competency were higher than ratings of understanding.

## **Chapter V**

### **Discussion**

The purpose of this study was to examine the impact of a parent training program for parents of children with disabilities on their knowledge/understanding and skills to implement and support generalization of their child's skills and behaviors across different settings. According to the literature, when it comes to teaching children with disabilities functional skills, parents play a major role (Mohsin et al., 2011). Research states that when parents are given the opportunity to gain new knowledge and learn new and effective strategies, supporting their child becomes much easier and less frustrating (Hancock, 2013). Initially, a summary of the results of the parent training are presented to provide a brief overview of the previous chapter. Additionally, the findings of this study are situated within existing literature regarding the impact of parent training and its effectiveness for parents. The remainder of this chapter will outline the implications, limitations, and suggestions for future research.

The following three research questions were examined as a part of this study: (a) What is the impact of a training program for parents of students with disabilities on their self-reported knowledge and skills to support generalization? (b) Are there differences in the reported knowledge and skills of parents based on parent level of education? (c) What are the differences in parent ratings of their understanding/knowledge versus their ratings of their skill to implement strategies across the categories of generalization training?

#### **Discussion of Findings**

A detailed discussion of the finding of this study is presented in response to the three research questions that guided this study.

**Parents' Self-Reported Knowledge and Skills.** The first research question addressed the impact that the parent training would have on the parents' self-reported knowledge and skills to support generalization with their child and to manage their child's behavior and emotions. The key findings of the study revealed that following the training, parents reported average to moderately high levels of knowledge of strategies for generalization and for managing their child's behaviors and emotions. Additionally, the parents also self-reported average to moderately high ratings on their skills and competence to support these generalization strategies. Findings from this study align with similar recent research examining the influence of parent training programs on parent knowledge/skills. Research from Hutchings et al. (2007) and Webster-Stratton et al. (2011) found that participants, as a result of participation in the Incredible Years Training Program (IYTP), noted an impact on their parenting, a new awareness of behaviors that were occurring, and an impact on how they responded to those behaviors. The current positive findings in relation to the parent's self-reported knowledge and skills is promising given research by McIntyre (2008) demonstrating that effective parent training programs can help build, foster, and strengthen positive parent-child relationships. Many parents need parent training to teach them the necessary strategies to implement generalization. Thus, with the correct resources such as training support/programs, potential exists for parents to successfully teach, implement, and monitor generalization skills using effective strategies.

Although the current study focused on parent self-reported knowledge and skills as an outcome, previous research does support the potential impact on child outcomes. The Parent Management Training-Oregon (PMTO) intervention program, results show

that when parents are given different intervention strategies to implement with their child, there are decreases in behavioral issues and decreases in dependence on parents, and an increase in positive parenting (Forgatch & Patterson, 2010). Bachman et al. (2011) found that when allowing parents to choose the intervention, the intervention has a more direct connection with the child. In this study, parents were introduced to several strategies for supporting externalizing behavior concerns and generalization of behavior; thus, parents are able to utilize those that are most relevant to their child.

Parent training also has a long history of being effective with parents of children with disabilities. Forehand and McMahon (1981) demonstrated evidence showing that building positive parenting skills and targeting parent-child interactions resulted in decreases in a child's behavior problems. Additional research (Webster-Stratton, 2011) has shown that training programs for parents focused on addressing behavioral concerns have been useful in reducing negative behavior such as aggression and antisocial behaviors, while increasing parents' competence and creating more positive parent-child relationships. Given positive results from the current study, it is hoped that such impacts will also be realized with the current sample of parents and their children with disabilities.

Effective parent trainings programs not only focus on proactive strategies but also teach parent how to implement those strategies to address specific behavior. This current study findings emphasized that when parents were taught strategies related to supporting generalization and addressing externalizing behavior, their reported competence level to implement the strategies was fairly high (i.e. an average to moderately high rating). During the training the parents were observed engaged in the content, and wanted to

ensure that they were learning exactly what was needed to put those effective strategies into place. This is similar to a study findings from Johnson et al. (2007) indicating that in order for parents to learn strategies that will be used to increase the positive behaviors in their child, they must also develop certain skills in behavioral management.

However, this study is somewhat unique because it targets parents of children with disabilities. Because of the behavioral issues of these children, it is important to build on their prior knowledge and skills. This is particularly relevant given the limited research on parent training with these populations. The positive findings highlight the potential for helping parents meet the needs of their children who demonstrate behavioral challenges. The format of the parent training should also be considered when interpreting these results. In the current study, a group format was used to train the parents while role-playing opportunities were offered to teach the effective strategies that could be implemented with the child. This aligns with previous research by Kaiser et al. (1995). They examined the literature on a variety of training methods including training the parents directly, teaching parents in groups, and using written manuals, all of which were shown to be effective in changing parent and child behavior. Hancock et al. (2013) outlined three conditions for success of parent training including (a) parents must choose to participate and make a commitment to learning the new skills; (b) parents must consider being involved in learning new skills important for their children's development; and (c) parents must have sufficient time, energy, and logistical support to make a relatively long-term commitment to learning and producing new skills with their children. The current study also emphasized these three conditions as parents made the choice to participate, learned new skills that could be implemented with their child, and

took the time to attend the training, while they also made a commitment to put into practice what was taught.

**Influence of Parent Education.** The second research question addressed the potential influence of parent educational levels on self-reported knowledge and skills. Based on the survey findings, there were no significant differences in ratings of any items between two groups based on their parental education levels (high-school or less vs. post-secondary degrees). Each group comprised one-half of the participants.

The findings regarding the parental education levels were a little surprising, given prior research. Previous research conducted by McMahon (1981) found that parents of low socioeconomic status SES. However, which is often highly correlated with educational levels, were less likely to enroll in, participate in, and complete parent training parents than parents with higher (SES). However, the present study findings support that even parents without formal postsecondary education reported high levels of self-reported knowledge and skills. This is an important implication as these parents gain the knowledge and skills needed to support their child by attending parent training, which can improve their ability to work with their child rather than rely on outside therapists to, whom they may or may not have accessibly too. Additionally, despite the educational level of the parents these participants represented parents who are concerned about providing the best supports for their children. Lastly, the current study showed that regardless of their educational level, parents of all educational levels can gain knowledge and skills though this type of training.

**Parent Knowledge vs. Competence.** This final research question examined the differences in parent ratings of understanding/knowledge (after Module 1) versus their

rating of competency to implement strategies (following Modules 3 and 4) across the seven categories of generalization. The Wilcoxon signed-rank test was used to examine the differences between a rating of understanding and rating a of competence for implementation across generalization categories. Results showed no significant differences between parents' rating of understanding and of competence for most categories of generalization. However, it did show a significant difference between parents' rating of understanding and their reported competency for the "train to generalize" category. Parents reported a higher level of competency than their ratings of understanding.

One of the potential reasons that parents reported levels of competency similar to or higher than their level of knowledge/understanding could be that by the completion of all modules in the training, parents had gained additional knowledge in comparison to after Module 1 only and thus felt generally competent. In addition to the premise that parents gained additional knowledge over the course of training, it is reasonable to assume that some parents felt that, given their moderate levels of understanding of these concepts and strategies, they would be able to implement with their child (i.e., they would be competent) with their child. Again, parents were seen as actively engaged during the activities, such as role-playing. This may have contributed to feelings of confidence in application of strategies, as reflected in parental self-report. As noted by Spangers and Hoogstraten (1989), an intervention may actually change participants' understanding or awareness of particular concepts and ultimately, how they estimate their own level of functioning with regard to the concept.

In sum, the literature affirms that for effective generalization of behaviors across settings to occur in children with disabilities, parents must have the knowledge and skills to implement strategies to support their children (Mohsin et al., 2011). Parent training opportunities that emphasize proactive measures that support parents are imperative to ameliorate the lack of generalization that can cause academic, social, and behavioral performances. Furthermore, parent training equips parents with strategies that they can use to address problem behaviors while building on their prior knowledge and skill level. When parents are taught the necessary strategies and are taught to implement the effective strategies with their child, the impact of positive outcomes increase (Hutchings et al., 2016).

### **Limitations**

The findings of this study should be interpreted in light of the fact that there was a small sample, and there was no data on the actual implementation of these strategies by parents with their child and no direct measures of child outcomes.

Due to the small sample ( $n = 14$ ), the results from the survey could have been impacted. The findings in the study were based on this small number of respondents and thus descriptive statistics can be heavily influenced by individual parent ratings/responses. The sample consisted of 12 women and 2 male out of 45 parents who have students enrolled. Results might have been different had a larger population of the parents with children at the center and/or additional fathers/grandfathers/male guardians had participated. Additionally, these parents in the sample were a representation from only one childcare center in the Houston area and thus, findings cannot be generalized to any other population.

Since the instrument that is used is a quantitative survey it is important to examine the format of the instrument. According to Preston and Colman (2000), Likert-type measures can impact standard deviation sizes and may not offer other sufficient options to differentiate the sample. Additionally, since it was a self-report survey, response bias could occur. Self-reporting bias is also a limitation that could possibly occur when providing a survey as a research tool. According to Hoskin (2012), researchers who use self-reported questionnaires such as surveys are relying on the honesty of the participants. Due to the relationship between the parents and researcher, responses to survey items by parents could have been influenced by a parent's need for social approval (i.e., to look good). This would have allowed the participants to rate themselves higher and make the more socially acceptable answer rather than being truthful (Althubaiti, 2016; DeLamater, 2016). Knowing that it was part of the researcher's dissertation process, parents might have rated themselves higher than what they would have if the investigator had been someone without a personal tie, and the findings ultimately could have been different.

This study is further limited by the fact that there are no data on actual implementation of these strategies by parents with their child and direct measures of child outcomes. Given the format, parents were not required to implement/practice the strategies with their child during the parent training, but only rated their own levels of knowledge and competence for strategies that have yet to be put into practice. Thus, we cannot make assumptions regarding the influence of this training on children's generalization of behavior or externalizing behavior issues. Lastly, the current study was a 6-hour 1-day study, it is possible that results could be different had the parents participated in a more prolonged training, such as some of the studies highlighted in

Chapter 2 of this document.

### **Implications and Recommendations for Practice**

**Recommendations to Support Parents in Generalization.** Due to this being a one-time training and given research by Bruner (1975) showing the potential impact for ongoing support, the following recommendations are offered with the goal of supporting for parents as they continue to support to their children with disabilities. A primary, overall recommendation would be to establish a focus group in a parent-friendly environment that supports parental participation. Establishing such a group will allow parents to meet once monthly, discuss possible new behaviors of their child, review prior strategies and/or discuss new strategies, and provide hands on/real-life applications for parents. This would provide the participants with immediate application of the knowledge and skills while providing a hands-on practice environment. The participants would have the opportunity to practice real-life scenarios that which enable the participants to apply the skills and knowledge directly in their daily roles with their child. Please see Chapter VI for an action plan.

**Recommendations for Parent Training.** The researcher's overall recommendation to continue supporting parents in obtaining the knowledge needed to successfully help to implement generalization skills includes several key strategies. The first strategy is to create an online training curriculum for parents. This online curriculum will allow parents to receive extra help in implementing strategies and/or skills that were taught in a face-to-face training, provide examples of each strategy, and include demonstrations that could enhance the parents' knowledge and understanding of each item. Lastly, the online parent training curriculum, which would deliver the content

digitally, would allow for increased participation of parents with children with disabilities.

Finally, the findings from this study exemplify that parent trainings are critical to the academic, social, and behavioral aspects of the lives of children with disabilities. These parent trainings need to be held frequently in order for the parents to continue to build on their prior knowledge and skills, while also learning new effective strategies and all the while, improving on the prior strategies that can assist with the generalization of their child's behavior across environments. Please see Chapter 6 for the Action Plan.

### **Recommendations for Future Research**

The aim of this study was to assess the impact of a parent training for parents of children with disabilities on self-reported knowledge and skill levels to support their children in generalizing behavior. Based on the results of this study and the review of the related literature, the following recommendations for further study are presented to continue supporting parents in generalizing behaviors for children with disabilities. First, this study should be replicated and allow for participation of parents of children with disabilities beyond those that are enrolled at Smartie Pants Academy Center. This can help increase the generalizability of findings. Second, it would be helpful to conduct a follow-up study with all the parents who participated in this current study to measure how effective or ineffective the training was for their child as a result of the exposure to the study. This could include direct observations of parent-child interactions in order to document the impact of parent support on critical outcomes such as increased generalization of behavior or decreased externalizing behaviors. Additional follow-up could be conducted that asks parents to report their knowledge/skill and their competency

in order to track long-term influence. Lastly, a qualitative examination regarding the influence of this parent training program could be completed. For example, conducting a 30-minute follow-up meeting (e.g. a focus group) with all parents would help identify and determine specific needs and themes as they relate to generalization and their child's behaviors.

## **Chapter VI**

### **Action Plan**

The purpose of this action plan is to provide parents of children with disabilities with a framework for developing and expanding their knowledge skillset to facilitate helping their children generalize their behaviors across environments. The framework includes four module topics: the importance of generalization, external behaviors that affect generalized behavior, effective strategies for addressing externalizing problems and self-regulation strategies. This action plan includes an online parent training that will contain four modules that can be accessed by parents at their leisure with two face-to-face supplemental trainings held during the within 12 months of the original training. This framework can be presented to parents/guardians or caregivers of children with disabilities. Its purpose is to provide these individuals with new strategies, build on their current knowledge and skillset, and ultimately be a primary trainer in the generalization of the child's behavior at school, home, and in the community.

The results from this study showed that if parents are given the opportunity to attend a training workshop and are taught effective strategies, they can acquire knowledge and skills to support generalization and address externalizing behaviors. First, after the training, these parents also reported their competence level "average to moderate." Second, there were no significant differences based on the self-reported knowledge and skills of the parents. Third, the findings from the study showed no significant differences between parent's self-reported ratings of their understanding and competence for the seven categories of generalization. An action plan must be created to

continue the efforts of helping parents support their children in the area of generalization based on the results from the data.

If we are to improve the generalization of behaviors of children with disabilities, parents must get adequate training that will teach them the effective strategies that are necessary to help them with their child. To do this, parents must continue training. Children with disabilities require greater parent involvement and advocacy than their peers without disabilities in order to be assured that they are successful academically, socially, and behaviorally. Children with disabilities often face multifaceted classroom and home challenges requiring special attention from their teachers and active engagement from their parents. Parents are their advocates, support system, and the ones who can provide the valuable information about their disability, leading to the accommodations and modifications necessary to ensure their success.

The results from the current study showed that parents who receive parent training opportunities report average to moderately high levels of knowledge of strategies for generalization and for managing their child's behaviors and emotions. Additionally, the parents also self-reported average to moderately high levels on their skills and competence to support these generalization strategies.

### **Online Parent Trainings**

Parent training is teaching parents to direct interventions for their children (Schoenbrodt, 2018). As in the current study, when parents are trained, they learn how to implement interventions and strategies for their child, and the behaviors of both the parent and child improves. Trainings help parents gain confidence when working with their child, improve the parent's teaching skills, and lead to implementation of more

teaching opportunities at home (Kasier & Hancock, 2003). Training parents promote real-life practice moderated by parents and thereby reduces the need for outside therapy.

Training for parents of children with disabilities can include a variety of training formats and instructional training techniques. Multiple studies have looked at various parent training delivery methods, such as group sessions, videotaping, and classroom-based information sessions. Online parent trainings are essential for parents of children with disabilities because the training can be accessed at any time, the materials are readily available, and parents can reference the training as many times as needed.

According to Brookman-Frazer et al., (2009), group formats are often the most preferable because they require limited resources and can reach a large number of individuals at once. As the current study shows, effective face-to-face training for parents allows sharing of content, modeling of effective strategies, practicing of principles taught, and lastly, providing feedback on the training—all of which are all important for parents.

However, face-to-face training also requires that parents have flexible schedules permitting attendance (Lakes et al., 2009), and that childcare is provided to ensure that parents can attend (Montes & Halterman, 2008). Online training sessions can also include demonstrations for parents to use as a guide when implementing effective strategies, and provide a break-down of information that may be unclear or unfamiliar. As such, the proposed action plan will address the training of parents via both online modules and in-person follow-up sessions.

## **Participants**

The primary participants for this action plan are parents or caregivers of children with disabilities. The plan targets these individuals as primary participants but will be readily available for all interested.

### **Timeline**

**Initial Online Training.** The online training will consist of four, approximately 1-hour long modules:

1. The Importance of Generalization
2. External Behaviors That Affect Generalized Behavior
3. Effective Strategies for Addressing Externalizing Problems
4. Self-Regulation Strategies

Additionally, each module in the online training will include access to video vignettes that provide the participants with a visual depiction and application of the specific strategies provided in the content. Participants will be able to complete the modules in order that is based on their own schedule; that is, not all modules have to be completed in a single session. (See Figure 5 for the online training agenda.)

Following their completion of all four modules in the online training, participants will be asked to complete the exit survey that will be provided online. This survey will allow for evaluation of the training modules in terms of parents self-reported knowledge and skill as an impact of the parent training. The instrument is the same one used in the parent training for the current study (See Appendix B).

<p><b>Module 1</b> <b>Importance of Generalization</b></p> <p><b>Time: 60 minutes</b></p>	<p><b>Overview:</b> Participants will learn about the seven categories of generalization. Participants will watch a vignette video on examples of each.</p> <p>The seven categories of generalization (Stokes &amp; Baer, 1977):</p> <ul style="list-style-type: none"> <li>• Introduction to Natural Maintaining Contingences</li> <li>• Train Sufficient Exemplars</li> <li>• Train Loosely</li> <li>• Using Indiscriminable Contingencies</li> <li>• Program Common Stimuli</li> <li>• Mediating Generalization</li> <li>• Train to Generalize</li> </ul> <p><b>Targeted objective:</b> At the completion of this module, participants will be able to identify the seven categories of generalization along with strategies and techniques to use to promote generalized behavior.</p>
<p><b>Module 2</b> <b>External Behaviors That Affect Generalized Behavior</b></p> <p><b>Time: 60 minutes</b></p>	<p><b>Overview:</b> Participants will learn about the importance of external/internal behaviors that a child can encounter. Participants will watch a video vignette that will cover external and internal behaviors and why they are important.</p> <ul style="list-style-type: none"> <li>• What are external behaviors?</li> <li>• Examples of External Behaviors (outside the child)</li> <li>• Examples of Internal Behaviors (inside the child)</li> <li>• Aggression</li> <li>• Delinquency</li> </ul> <p><b>Targeted objective:</b> At the completion of this module, participants will be able to identify externalizing and internalizing behaviors.</p>
<p><b>Module 3</b> <b>Effective Strategies for Addressing Externalizing Problems</b></p> <p><b>Time: 60 minutes</b></p>	<p><b>Directions:</b> Participants will learn effective strategies that can be used to generalize behaviors with children with disabilities. Participants will watch video vignettes which will demonstrate how to implement these strategies with their child.</p> <ul style="list-style-type: none"> <li>• How will you choose to participate and make a commitment to learning the new skills necessary for your child's progress?</li> </ul>

<p><b>Module 4</b> <b>Self-Regulation Strategies</b></p> <p><b>Time: 60 minutes</b></p>	<ul style="list-style-type: none"> <li>• What commitments will you make in learning new skills important for their children’s development?</li> <li>• What long-term commitment will you make to learning and producing new skills with your child?</li> </ul> <p><b>Targeted objective:</b> At the completion of this module, participants will be able to address each strategy and implement each effective with their child.</p> <p><b>Overview:</b> Participants will learn about four different self-regulation strategies and examples will be provided for each. Participants will read different scenarios that outlines one of the following self-regulation strategies, using a multiple-choice format they will check the correct answer to check for understanding.</p> <ul style="list-style-type: none"> <li>• Self- monitoring</li> <li>• Self-monitoring plus reinforcement</li> <li>• Self-reinforcement</li> <li>• Self-management</li> </ul> <p><b>Targeted objective:</b> At the completion of this module, participants will be able to identify the four areas of self-regulation strategies and skills to implement the strategies with their child.</p>
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*Figure 5.* Parent Training Action Plan timeline.

**Follow-up Sessions.** In addition to the online training, parents will be encouraged to participate in two 2-hour face-to-face supplemental sessions following the online trainings. Prior to the start of the supplemental training sessions (Figure 6), parents would rate their competency on putting into practice the generalization strategies learned in the online training (See Appendix C).



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## Appendix A

### Parent Training Agenda: Building Parents Knowledge and Skills

8:30-9:00 Welcome & Breakfast

9:00-9:40 Introductions of Participants

**Directions:**

- Facilitator ensures that parents have name tags
- Facilitator introduces herself to the group and covers any housekeeping issues
- Facilitator records on flip chart the reasons parents state they are there or any concerns they have

**Group Activity:** Partner Introductions. Participants will pair up, meet one another and ask one another a few questions; partners will then be asked to introduce one another to the larger group.

Setting Ground Rules (10 minutes)

**Directions:**

- Ground rules will be recorded on a flip chart to ensure that all participants agree

10:00-12:00 Module 1-2

**Module 1 - Importance of Generalization – 50 minutes**

**Directions:** Presenter will teach concepts and information prior to the group activity. Participants will use role playing in learning the seven categories of generalization.

**Group Activity:** Participants will create seven groups. Each group will be given one of the seven categories of generalization to create a role-playing scenario. Along with the role-playing scenario groups can provide an oral presentation or written statement.

- Stokes & Baer seven categories of generalization
  - Introduction to natural maintaining contingencies
  - Train Sufficient Exemplars
  - Train loosely
  - Using indiscriminable contingencies

- Program Common Stimuli
- Mediating generalization
- Train to generalize

**Targeted objective:** At the completion of this module, parents will be able to identify the seven categories of generalization along with strategies and techniques to use to promote generalized behavior.

**Question and Answer – 20 minutes**

**Module 2 - External Behaviors that affect Generalized Behavior (40 minutes)**

**Directions:** Parents will use the think, pair, share technique to engage a meaning conversation about external behaviors and internal behaviors.

**Group Activity:** Parents will be paired up with a partner. Answering the following questions using flip charts:

- What are external behaviors?
- Examples of External Behaviors (outside the child)
- Examples of Internal Behaviors (within the child)
- Aggression
- Delinquency
- Hyperactivity

The paired groups will then share with all the participants. The presenter will record the parents thoughts on a separate piece of flip chart paper and hang for all to see and be able to reference throughout the professional development.

**Targeted objective:** At the completion of this module, parents will be able to identify external and internal behaviors.

12:00-1:00 Lunch

1:00-3:45 Module 3 and 4

**Module 3 - Effective Strategies for externalizing problems - 40 minutes**

**Directions:** Participants will use a web organizer to address effective strategies.

**Group Activity:** Participants will be given a web organizer by the presenter that will be used to address the following:

- How will you choose to participate and make a commitment to learning the new skills necessary for your child's progress?
- What commitments will you make in learning new skills important for their children's development?
- What long-term commitment will you make to learning and producing new skills with your child?

**Targeted objective:** At the completion of this module, parents will be able to address each strategy and implement each effective to their life.

**Module 4- Self-Regulation Strategies (40 minutes)**

**Directions:** Parents will use the 4 Corners active learning strategy for this part of the professional development. This active learning strategy will allow parents to tap into their prior knowledge of the subject.

**Group Activity: Prepare:** Presenter will use a multiple-choice format shown on the projector screen while each corner of the room will be labeled with different letters A, B,C, D posted on chart paper.

**Present:** Presenter will read different scenarios that outlines one of the following self-regulation strategies. Parents will be given the time to independently think about the scenario, presenter repeating it if necessary.

- Self-monitoring
- Self-monitoring plus reinforcement
- Self-reinforcement
- Self-management

**Commit to a corner:** Presenter will ask the parents to commit to a corner that corresponds to their choice. In each corner parents will form groups of three or four to discuss the reasons for selecting a choice.

**Discuss:** Allow two to three minutes of discussion. Call on parents to present a group summary of their opinions. This can be done as an oral presentation or a written statement.

**Targeted objective:** At the completion of this module, parents will be able to identify the four areas of self-regulation strategies and skills to implement the strategies with their child.

**Question and Answer** (15 minutes)

3:45-4:00

Wrap Up (Exit Survey)

Please take a moment to complete the exit survey (See Appendix 2)

## Appendix B

### Parent Training Exit Survey

**Please answer questions 1–11 prior to the start of the training.**

1. How old is your child?

\_\_\_\_\_ years \_\_\_\_\_ months

2. With what disability has your child been diagnosed?

Autism

ADHD

Down Syndrome

Other \_\_\_\_\_

3. Are you the child's mother, father, step-parent, or guardian?

Mother

Father

Step-mother

Step-father

Guardian

4. What is your gender?

Female

Male

5. What is your age range?

18-24

25-34

35-44

45-54

55-64

65 and over

6. What is the highest level of education you completed?

Some High School

High School Diploma/GED

Bachelor's Degree

Master's Degree

Doctorate Degree

7. How many children are in the family? (Circle the answer and/or fill in the blank.)

1            2            3            4            5            6            7 or more

How many with a disability?

1            2            3            4            5            6            7 or more

If you have multiple children, what number in the birth order is the child about whom you are answering this survey?

1            2            3            4            5            6            Other \_\_\_\_\_

8. What is the amount of prior training you have related to behavior support including generalization of behavior across settings? (Circle one.)

None 1	Minimal 2	Some 3	Moderate 4	Extensive 5
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9. On a scale from 1 to 5, rate your **knowledge and skills in managing your child's behavioral challenges or difficulties**. (Circle one.)

No Knowledge and Skills 1	Little Knowledge and Few Skills 2	Some/Average Knowledge and Skills 3	Good Knowledge and Skills 4	Excellent Knowledge and Skills 5
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10. On a scale from 1 to 5, rate your **knowledge and skills related to child's disability**. (Circle one.)

No Knowledge and Skills 1	Little Knowledge and Few Skills 2	Some/Average Knowledge and Skills 3	Good Knowledge and Skills 4	Excellent Knowledge and Skills 5
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### Module 1

*After participating in Module 1, please answer questions 11 and 12:.*

11. How would you rate your child's ability to generalize behavior strategies from one environment to another?

Excellent

Good

Average

Fair

Poor

Rating Scale for Question 12				
No competence 1	Low level of competence 2	Average level of competence 3	Moderately high level of competence 4	High level of competence 5
12. As a result of Module 1, rate your <i>understanding/knowledge</i> of the following principles of generalization of behavior from 1 (no competence) to 5 (high level of competence):				
(a) introduce child to natural maintaining contingencies				
1	2	3	4	5
(b) train sufficiently				
1	2	3	4	5
(c) train loosely				
1	2	3	4	5
(d) use indiscriminable contingencies				
1	2	3	4	5
(e) program common stimuli				
1	2	3	4	5
(f) mediate generalization				
1	2	3	4	5
(g) train to "generalize"				
1	2	3	4	5

## Module 2

*After you participate in Module 2, please answer the following questions:*

13. As a result of Module 2, please rate your level of competence in identifying and describing different examples of externalizing behavior that a child might exhibit.

No competence 1	Low level of competence 2	Average level of competence 3	Moderately high level of competence 4	High level of competence 5
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## Modules 3 and 4

*After you participate in Modules 3 and 4, please answer questions 14–16:*

Rating Scale for Question 14				
No competence 1	Low level of competence 2	Average level of competence 3	Moderately high level of competence 4	High level of competence 5
14. As a result of Modules 3 and 4, how confident are you in your <b>skills and ability to implement the specific generalization strategies with one or more of your children:</b>				
(a) introduce child to natural maintaining contingencies				
1	2	3	4	5
(b) train sufficiently				
1	2	3	4	5
(c) train loosely				
1	2	3	4	5
(d) use indiscriminable contingencies				
1	2	3	4	5
(e) program common stimuli				
1	2	3	4	5
(f) mediate generalization				
1	2	3	4	5
(g) train to “generalize”				
1	2	3	4	5

Rating Scale for Questions 15 and 16				
Not Competent 1	Somewhat Competent 2	Uncertain 3	Competent 4	Highly Competent 5

15. As a result of these Modules, how confident are you in using the strategies discussed in order to help your child deal with his or her <b>EMOTIONS</b> appropriately? (Circle one.)				
1	2	3	4	5

16. As a result of these Modules, how confident are you in using the strategies discussed to help your child deal with his or her <b>BEHAVIORS</b> appropriately? (Circle one.)				
1	2	3	4	5

## Appendix C

### Supplemental Training Parent Survey

*Instructions: This survey is to be completed prior to the training.*

<b>Rating Scale for Questions 1–3</b>					
No.	<b>Not Competent</b>	<b>Somewhat Competent</b>	<b>Uncertain</b>	<b>Competent</b>	<b>Highly Competent</b>
1.	Since your initial participation in online training modules, how would you rate your implementation of the generalization strategies with your child? (Circle one.)				
	1	2	3	4	5
2.	Since your initial participation in online training modules, how would you rate your ability to manage your child's behavior and/or emotions while implementing behavioral strategies? (Circle one.)				
	1	2	3	4	5
3.	Since initial training, how would you rate your child's ability to generalize behavior? (Circle one.)				
	1	2	3	4	5
<b>Rating Scale for Question 4</b>					
No.	<b>Significantly worse</b>	<b>Slightly worse</b>	<b>No difference</b>	<b>Slightly better</b>	<b>Significantly better</b>
4.	Since initial training, how would you rate your child's externalizing behavior? (Circle one.)				
	1	2	3	4	5

## Appendix D

### Supplemental Training Parent Exit Survey

*Instructions: This survey is to be completed after the training.*

		<b>Rating Scale</b>				
No.		<b>Not Competent</b>	<b>Somewhat Competent</b>	<b>Uncertain</b>	<b>Competent</b>	<b>Highly Competent</b>
1.	How would you rate yourself after the supplemental training with regard to implementing the generalization strategies with your child? (Circle one.)	1	2	3	4	5
2.	How would you rate yourself after the supplemental training with regard to your ability to manage your child's behavior while implementing externalizing behavior strategies? (Circle one.)	1	2	3	4	5