Supporting general education teachers in the inclusive classroom with students with autism that display challenging behaviors

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Abstract

Currently the federal law is focusing on educating students with disabilities in the Least Restrictive Environment (LRE); therefore, the school system has changed the way it serves students with Autism Spectrum Disorder (ASD). Students with autism are now being placed in the general education setting and general education teachers are expected to serve students with autism without proper training or support. A training workshop focused on increasing and enhancing strategies for general education teachers to effectively include and instruct students with ASD. A teacher-workshop was planned and developed to provide general education teachers with the information and strategies needed to help students with autism who display challenging behaviors. Results from the study indicated that teachers benefit from specific training aimed at meeting the behavioral demands that students with autism exemplify in a general education classroom. Moreover, the researcher to ensure maintenance of the workshop strategies provided added support.
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Chapter I
Introduction

In the last 30 years, the occurrence of Autism Spectrum Disorder (ASD) has increased dramatically (Holtz, Ziegert & Baker, 2004). According to National Autism Center manual, ASD affects one in 68 children (2014). Autism is defined as a neurological disorder that can be diagnosed as early as three years of age. Autism occurs in all racial, ethnicity and socioeconomic groups but is more common with in the white population. Autism is also more common among boys than it is in girls (Kogan et. al., 2007). The main behavior challenges seen in students with autism include social interaction and speech and language development (Deutch, 2005). The Individuals with Disabilities Education Act (IDEA) of 2004 allows all children with disabilities to have access to a Free and Appropriate Public Education (FAPE) in the Least Restrictive Environment (LRE). Least Restrictive Environment allows students with disabilities to be included in the general education setting with non-disable peers as well as to have access to the general education curriculum and other programs that non-disabled peers are able to access. Furthermore, it allows students the right to supplementary aids and services if needed in order for them to be successful with their educational goals when included in general educational environments.

General education teachers typically do not have the skills or the knowledge to work with ASD students. There are many practical strategies available for general education teachers through workshops or training on how to work with students with ASD but not many teachers have the opportunity to attend them and when they do attend, strategies do not make it into the classroom due to the lack of implementation knowledge.
and practice. More and more educational opportunities are being afforded to students with autism in the general education classroom making it essential to ascertain the knowledge base and training general education teachers receive and what strategies they use to support students with ASD when placed in their classroom. It is also important to find out how comfortable they feel when working with ASD students who display challenging behaviors.

Characteristics of students with ASD that are seen often include deficits in social interactions and communication and restricted, repetitive, and stereotyped behaviors patterns (Kogan et al., 2009). Some of the most difficult features of social interaction in students with ASD include communicating their ideas or their feelings as well as difficulty comprehending what others feel or think. They may also lack empathy towards others (Crosland & Dunlap, 2012). Repetitive and stereotyped behaviors may include spinning of object or lining up objects in a specific way, obsession with certain things and flapping of the hands (Deutch, 2005).

**Problem Statement**

Due to the Individuals with Disabilities Education Act (IDEA, 2004) with a clear and identified focus on educating students with disabilities in the Least Restrictive Environment (LRE), the school system has begun to change the way they serve students with autism. The focus of service and to a degree, placement, is now the general education setting. Students with autism are being included in the general education classroom despite their many challenging behaviors and teachers are responsible for including and providing effective interventions to support them without proper training (Koegel et al., 2012; Lovannone et al., 2003). Crosland & Dunlap suggests that in order
to properly support students with ASD, educators need to focus on the school environment; how the classroom is set up to facilitate learning for the child, the consistency of the classroom routine, and accommodations available for the student.

According to Koegel et. al., (2012) in order to support students with ASD in the inclusive classroom, public school systems should be responsible for implementing proper interventions that are focused in communication and socialization skills. This focus on communication and socialization provides a foundation for teachers to deal effectively with behaviors associated with ASD. As general educators develop more confidence, as well as experience success with integrating students with ASD in the nexus of the classroom, there is an increased likelihood that students with ASD will experience success. However, students with ASD who present challenging behaviors require that teachers have the requisite skill and knowledge of how to deal appropriately and quickly with said behaviors. This unfortunately is not the case, and most general education teachers then resort to relying on special education behavior technicians or behavior specialist to intervene and provide support. This may be appropriate in some situations, but in many ways undermines the credibility of the special educators i.e., you are unable to handle this and the special educators are the only ones trained to do so in a competent fashion. There defiantly is a need to identify how general education teachers’ deal with academic and social challenges in accommodating students with ASD when included in their classroom. Above and beyond inclusion of students with ASD in the general education classroom, general educators need to be at least moderately adept at handling challenging behaviors. Therefore, there is a need to not only increase the knowledge base of general education teachers regarding ASD and basic accommodations, but also to
better understand their needs in dealing with challenging behaviors students with ASD may portray in their classrooms.

**Purpose of the Study**

The purpose of this study is to gain enhanced understanding of what general education teacher know about core deficits of autism (i.e. social interaction, deficits in communication, restricted, repetitive, and stereotyped patterns of behavior). As well what types of training they would need to improve their skills and increase their effectiveness when working with students with ASD in the respective classroom. Additionally, the research will focus on direct and indirect classroom support by the special education teacher to analyze the effectiveness of supporting the general education teacher to provide appropriate academic and social support of students with autism included in the classroom. A central feature of the research will concentrate on how educators cope with challenging behaviors displayed by students with autism in both general and special educational settings.

A survey will be conducted with general education teachers to ascertain how they support core deficits of autism and the type of training they may or may not have received to support students with ASD in their classrooms. The research will also explore how general education teachers respond to direct and indirect support from a special educator who serves students. Since challenging behaviors often interfere with program support for students with ASD in general education setting, a survey will be developed and given to general education teachers to better understand how to serve students with ASD who have behavior challenges.
Research Questions

1. How do general education teachers perceive their own ability to educate students with Autism?

2. What types of student behavioral issues do general education teachers consider to be most essential to include in a training workshop designed to help them support their students with ASD?

3. Does a workshop designed to meet their identified needs impact their perceived abilities?

Theoretical Model

General education teachers are dealing with more behavior challenges in their classroom due to the growing number of children with autism served in the general education setting. Behaviors displayed by students with autism vary in each individual child and what constitutes to appropriate training to support students with autism is in question. According to Blackley-Smith et. al., (2009), understanding the nature of an existing behavior needs to be evaluated. This is why is so important to find out what background knowledge do general education teachers have in order to support children with autism placed in their general education classrooms.

Many studies have been done in order to understand human behavior. One particular theoretical model that supports human behavior is Applied Behavioral Analysis (ABA). Applied Behavior Analysis is an approach that looks at social issues and uses applied behavior principles to increase and understand the variables that influence human behavior and it is also a commonly used intervention program to treat students with autism (Sundberg & Michael, 2001). Furthermore, ABA incorporates a key aspect of
behavior psychology, operant conditioning, which according to (Crosland & Dunlap, 2012) is a "process of behavior modification in which the likelihood of a specific behavior is increased or decreased through positive or negative reinforcement each time the behavior is exhibited". The ABA theoretical model supports this study due to the fact that instructional practice for students with challenging behaviors embrace the principles of behavior psychology developed by Thorndike and Skinner. Children with autism are unique in their own way and there is not a "one fits all" intervention to support each and every one of them, however when educators use ABA appropriately the impact on students' behavioral development can be considerable.

B. F. Skinner, the leading contributor of ABA focused on specific behavior along with the pattern of the behavior in order to target behavior to be changed through operant conditioning. Skinner claimed that in order to change a behavior one must focus in understanding the problem causing the behavior as well as looking at the environment to make modifications needed in order to support the student of focus. Crosland & Dunlap agreed that we must focus on the environment in order to develop proper support for students with ASD (2012). Furthermore, Skinner looked at analysis of verbal behavior, which he called verbal operant. He defined verbal behavior as "behavior that is reinforced through the mediation of another person's behavior" (SundBerg & Michael, 2001). His focus was the behavior of the individual rather than the verbal ability of the individual. Skinner used verbal operant as a unit of behavior analysis. In Behavior Analysis, language or verbal operant is viewed as a behavior. As with any behavior, antecedents and consequences affect language. There are four different verbal operants in Behavior Analysis. The first one is mand. In manding there is a motivation of wanting something.
The child receives what he/she wants when he/she responds appropriately to a request, when asked to do something, a command or/and a demand. The next verbal operant is tact. Tact is controlled by sensory. Tact is also known as labeling or naming. An example of tact is if the child smells a “cookie” and the adult shows the child a “cookie”, the child response by pointing at the cookie and saying “cookie”. There is no specific reinforcement in tact. Tact includes events such as praise, head nods, or other forms of attention. The third is echoic, that is repeating back. The educator focuses on targeted vocabulary and asks the child to repeat back after him/her. In echoic the antecedent is someone else’s vocal respond such as praise. The last one verbal operant is intraverbal, which deals with conversation responses and answering questions. There is no specific antecedent in intraverbal. The consequence of intraverbal is a verbal stimulus, such as filling in responses, completing phrases, word associations and answering questions (Miklos & DiPuglia, 2010). The role of the listener is so critical in verbal operant due the events that take place before and after mand, tact, echoic and intraverbal operants have been implemented. The listener should have learned how to respond appropriately to specific tasks and those skills should be transferred over to other events and or situations.

Since deficits in communication is one of the main characteristics in individuals with autism and the cause of some behavior challenges, as stated before ABA is commonly used to treat students. One specific behavioral intervention that has brought positive outcomes for students with autism in research settings is Pivotal Response Training (PRT), which was developed by Koegel & Koegel on the foundations of ABA. Both Skinner’s principles of ABA and PRT assume that children’s impairments can be improved with environmental manipulations, such as reinforcement, consequences, and
extinction which are central to a wide range of a child’s functioning and it relies on naturally occurring teaching opportunities and naturally occurring consequences to improved their language, play skills and reduced their amount of difficult behaviors. Furthermore, PRT strategies have successfully been facilitating learning of students with autism in inclusion programs (Koegel, Vernon & Koegel, 2009; Harrower & Dunlap, 2001).

**Researcher Background**

As a K-3rd grade special education teacher, I have experience an increasing number of students with ASD. Most of these students are coming to school with an existing diagnosis of autism and an individualized learning plan (IEP) in placed. All students with ASD that have been and are currently in my caseload have difficulties in the areas of Obsessive Compulsive Disorder (OCD), speech and language difficulties, fine and gross motor difficulties, fears, anxieties, difficulties with social interaction, inability to read facial expressions and/or body language, and other challenging behaviors. However, interestingly enough all of the students with ASD that I’ve had and currently have in my caseload have been academically at grade level or higher.

My interest on behavior in students with ASD is because at my school, behavior has been a concern when dealing with students with ASD. The concerns have come for the general education teachers, yard supervisors and parents. The concerns clearly indicate to me that teachers, parents and other staff are lacking the skills to support students with ASD. I believe that we must understand what is meant by behavior and define it in order to address the concern. I also agree with B.F. Skinner’s Philosophy of looking at the environment to evaluate any possible connections to the behavior a child
displays. We must also focus on the behavior of individual children in order to support their individual need. I’ve learned as a special education teacher that a behavior is an action that can be observe. Behavior can be seen, touched, and heard. In other words, you can prove its existence.

Definition of Terms

- **Anxiety**- Cause nervousness, fear, apprehension, and worrying.

- **Applied Behavior Analysis**- identifying goals in terms of specific behaviors to be altered in frequency; recording target behaviors; identifying effective forms of reinforcement; the use of extinction, shaping, and intermittent reinforcement; the development of operant stimulus control, stimulus prompting, and the fading of prompts; and the development of chaining, generalization, rules, imitation, modeling, and other now well-known behavioral procedures (Sundberg & Michael, 2001).

- **Autism Spectrum Disorder (ASD)**- A disorder of neural development characterized by impaired social interaction and communication and restricted and repetitive behavior (Kogan et.al., 2009).

- **Behavior**- Observable and measurable act of an individual.

- **Challenging Behaviors**- Intense and frequent behaviors that are lengthy and could physically endanger the person or others around him or her or behaviors that deny access to the regular public school system (Machalicek, O’Reilly, Beretvas, Sigafoos & Lancioni, 2007)

- **Collaboration**- Improve teacher practice and student learning, build a common vision for schooling and foster collective action around school reform.
**Individual Education Plan (IEP)** - a written statement for each child with a disability that is developed, reviewed and revised. It includes a statement of measurable annual goals, including academic and functional goals, designed to meet the child's needs that result from the child's disability to enable the child to be involved in and make progress in the general education curriculum (Wrightslaw, 2008).

- **Intervention** - Treatments or therapy to treat behavior as well as increase social skills, acquisition of academic or functional skills and assisting students in transitions and novel situations (Kokina & Kern, 2012)

- **Mainstreaming** - An ideal situation and IDEA's preference for the placement of exceptional students. Placement of exceptional students is to be in the least restrictive environment as possible, which means, regular classroom setting.

- **Obsessive Compulsive Disorder (OCD)** - An anxiety disorder characterized by repetitive behaviors aimed at reducing the associated anxiety, by a combination of such obsession and compulsions (The National Autism Center’s Guide to Providing Appropriate Interventions to Students with Autism Spectrum Disorder).

- **Operant Conditioning** - a process of behavior modification in which the likelihood of a specific behavior is increased or decreased through positive or negative reinforcement each time the behavior is exhibited (Crosland & Dunlap, 2012).

- **Self-Injurious Behavior (SIB)** - Complex behaviors that vary by characteristics such as function, site of injury, underlying mechanism, and whether or not it is repetitive in nature (Boyd, McDonough & Bodfish, 2011).
- **Social Skills** - Skills used to communicate with others, both verbally and non-verbally, through gestures and body language.

- **Stereotypic Behaviors** - Repetitious behaviors that serves no clear purpose or goal (Boyd, McDonough & Bodfish, 2011).

- **Thorndike’s “Law of Effect”** - Behavior that is followed by pleasant consequences is likely to be repeated, and any behavior followed by unpleasant consequences is likely to be stopped (Galef, 1998).
Chapter 2

Introduction

Autism occurrences have risen in the last 30 years and it is continually rising (Holtz, Ziegert & Baker, 2004; Kogan et.al., 2009; Crosland & Dunlap, 2012). About 1 in 50 children have been identified with some form of autism spectrum disability (ASD) (Blumberg et.al., 2013). Autism occurs in all racial, ethnicity and socioeconomic groups but is more common with in the white population. The number of Hispanics diagnosed with ASD has increase since 1997; it increased from 10% to 23% in 2002. Autism is also more common among boys than it is in girls (Kogan et.al., 2007; Baker-Ericzen, Stahmer & burns, 2007). Autism has been defined as a neurological disorder that can be diagnosed as early as three years of age. The main difficulties seen in students with autism include social interaction and speech and language development (Holtz, Ziegert & Baker, 2004; Crossland & Dunlap, 2012). The Individuals with Disabilities Education Act (IDEA) of 2004 allows all children with disabilities to have access to a free and appropriate public education (FAPE). This includes children with ASD. Furthermore, FAPE guarantees parent participation throughout the special education referral, assessment, diagnosis, placement, Individual Education Plans (IEPs), and transition services (IDEA, 2004).

Technology

A methodical search through three computerized databases was conducted. The databases accessed were Google Scholar, ERIC, and Academic Search Elite (Ebsco). The following searches were used: (a) Educators Rights to Autism, (b) Center for Disease Control and Prevention, (c) Children with autism, (d) Wrightslaw, (e) challenging behavior, (f) psychotic behaviors, (g) disabilities, (h) interventions, (i) treatments, (j)
Individuals with Disabilities Act, (k) Special Education, (l) school challenges, (m) special programs. The following descriptors were used to search through each of the databases. References at the end of each of each article were also reviewed. Selected articles and case studies were thoroughly reviewed for comprehension.

Studies were included in this review if: (a) Selected articles were published between 1994 and 2012, (b) articles involved teachers’ attitudes and training, (c) articles addressed interventions and treatments (d) articles focused on parents’ attitudes towards autism, (e) articles focused on collaboration between general education and special education teachers, (f) articles focused on staff training needs, (g) articles focused on at least two participants, (h) articles included elementary school students through adulthood, (i) articles focused on challenging behaviors, (j) articles focused on studies done in the United States, (k) articles focused on diagnostic criteria, (m) articles focused on defining challenging behaviors.

**Characteristics and deficits of the Child with Autism**

The Oregon Department of Education states that the primary deficit seen in students with ASD is social interaction. Social interaction deficits are tied with deficits with articulation. Due to the lack of articulation, students with autism cannot express their feelings, experiences and preferences. Furthermore communication impairments, sensory abnormalities and the lack of social interaction, will cause a child to manifest difficulties in processing information and cause them to have challenging behaviors. Therefore, there is a need for educators to target social difficulties in students with ASD. If social development is not targeted, students with ASD will not develop good social interaction, which are rewarding and motivating and it will interfere with transitions
students need to make throughout their day (2003). Leach & Duffy add to the list deficits caused by the common characteristics and sensitivity and needs such as need for sameness and difficulty with transitions as well as sensory sensitivity. Deficits caused by the main characteristics include lack of eye contact during interaction, aggression towards others, long lasting tantrums, self-injurious behaviors, and lack of affection. Furthermore, characteristics of the child with ASD and their needs will cause them to go into "their own world" making them fall behind at school (2009).

**Description of Challenging Behaviors**

Behaviors impairments of students with autism include social interaction, communication, along with restricted, repetitive, stereotyped patterns of behavior, non-compliance and aggressive (Matson, Mahan, Hess, Fodstad & Neal, 2010; Stahmer, Collings & Palinkas, 2005; Blumberg et.al., 2013). Stereotype behaviors are specified as body rocking, finger flicking, hand clapping, hand flapping, obscene mouthing, and vocal noises. These behaviors are considered to be chronic and interfere with students getting an education and social opportunities (McTiernan, Leader, Healy & Mannion, 2011). Other behaviors often identified as challenging include paranoia, anxiety and depression. These behaviors are seen as "culturally abnormal behaviors" because they can lead to self-injurious and can be very difficult to handle due to the occurrence, intensity and the duration of the behaviors. Educators need to be consistent and structured when supporting students especially in these areas and in the areas of functional communication, instruction on social skills, and a functional and positive approach to supporting behavior (Stahmer, Collings, & Palinkas, 2005; Kokina & Kern, 2010).
Reasons Behind Challenging Behaviors

Challenging behaviors in students with autism are displayed when they lack adaptive behaviors such as self-help and social skills. In addition to the lack of adaptive behaviors, students also display aggressive behaviors that they are not aware of which may contribute to the reputation of being bad or purposely aggressive. Furthermore, aggressive behaviors are learned behaviors towards another individual to get what the individual wants. Lack of language skills to interact with others in a traditional way may be a factor for developing challenging behaviors (Matson, Mahan, Hess, Fodstad & Neal, 2010; Yi, Chirstian, Vittimberga, & Lowenkron, 2006). Low IQ scores is another reason why many individuals with autism may exhibit challenging behaviors (McTiernan, Leader, Healy & Mannion, 2011).

School Staff Lack Skills to Support Students with Autism

Due to the rising numbers of students with autism being mainstreamed in the general education classrooms; there is a demand for hiring highly qualified special education teachers and other professionals (Leach & Duffy, 2009). Currently districts have been dealing with is shortages and attrition among trained professionals that can work with these population of students. Training is available for special educator, paraprofessional and parents but funds are limited to continue proper training. Furthermore, some experts in the field of autism have come to the conclusion that there are no strategies that work long term to support students even if staff has been properly trained. Inclusions of students with ASD with challenging behaviors require extra support therefore, educators including instructional assistants are becoming overwhelmed and burned out (McDonell et. al., 2008; Crosland & Dunlap 2012). Challenges that are
overwhelming and wearing out teachers and staff are all connected to the lack of training support to work with these students (Scheuermann, Webber, Boutot & Goodwin, 2003; Marder, deBettencourt, 2012; McDonellet, et. al., 2008).

Role of the General Education Teacher

When students with autism are placed in the general education setting, the goal of the school as well as the general education teacher is to provide students with an environment that supports them and helps facilitate assimilation into the classroom. General education teachers need to be understanding and be patience when working with students with autism. They need to have background knowledge of autism as well as knowledge of educational approaches that will support the students placed in their classrooms. Students with autism need to be smoothly transitioned into the general education setting, however the transition process can be a very challenging experienced for both the student and the general education teacher because there are so many ways to support students with autism and the support needs to be personalized (Holtz, Ziegert & Baker, 2004).

Collaboration Between Parents and other Team Members

Parents of students with autism should be involved in school in order for them to help provide proper support for their children. Frequent communication and collaboration between parent and teacher should always take place because parents are the best source of information when behavior issues arise or when and how to approach some behavior issues. It is in the child’s best interest for parent and teacher to be on the same page because children with autism need consistency both at home and at school. When both parents and teachers are on the same page, children will have better outcomes (Holtz,
Communication and collaboration should also take place with other team members working with the student with autism. Other team members may include occupational therapist, speech and language therapist, special education teacher and other exports in the field that support the child. When collaboration and communication take place among professionals working with the student, the greater the outcome results will be for the child with autism. Through the communication and collaboration process, the child will not only have a well-developed focused Individual Learning Plan (IEP) but also a followed through implementation of targeted individualized goals (Holtz, Ziegert & Baker 2004; Scheuermann, Webber, Boutot & Goodwin, 2003; Koegel, Matos-Freden, Lang & Koegel, 2011).

**Importance of Treatment**

Early intervention for students with autism is critical but after a diagnosis it is very challenging to decide what intervention should be implemented. Behavior specialists, speech-language pathologists, occupational or physical therapists, and other professionals may provide therapeutic services outside the school setting (Crosland & Dunlap, 2012). There are many treatments and therapies for students with ASD, but not one has yet been identified as the right treatment or therapy that meets the needs of all individuals (Baker-Ericzen, Stahmer & Burnes, 2007). Early intervention support is mainly focused in targeting deficits in speech and language (McTiernan, Leader, Healy & Mannion, 2011; Yi, Christtian, Vittimberga & Lowenkron, 2006; McDonell et.al., 2008). Due to the Least Restrictive Environment (LRE), inclusion programs have been looked at as most beneficial for students with ASD. Many studies have showed that students with
ASD have higher levels of social skills, larger circle of friends and academics achievement when placed in an inclusion program compared to those students who are in isolated programs (Leach & Duffy, 2009; Harrower & Dunlap, 2001). Public schools with inclusion settings are required to provide interventions to support for students with ASD since they are at school most of their day, but concerns have risen about evidence-based practices being implementing correctly. Furthermore, even though inclusion in the general education setting has been proven to be effective for students with autism, it is not enough for them to gain the skills they need for an appropriate education.

**Effective Interventions**

Among evidence-based practices are story-based interventions that are design to teach independence, and Pivotal Response Treatment (PRT) which is Naturalistic Teaching Strategies (NTS). Pivotal Response Treatment is based on Applied Behavior Analysis, which indicates that children's impairments can be improved through environment manipulation such as reinforcements and consequences. Both methods teach skills in the natural environment and create situations in which the student will be motivated to learn (Dawson, 2008; Heiger et.al., 2008; Homer et.al., 2005; Johnston & Pennypacker, 1993; Kazdin,1998; Stahmer, Collings & Palinkas, 2005; Koegel, Matos-Freden, Lang, & Koegel, 2012; Deutsch Smith, 2005). In order for students with autism to have success at school with the interventions being implemented by teachers and other professionals, parents must also be on the same page as teachers by supporting teachers at school and implementing those interventions at home (Crosland & Dunlap, 2012).

Pivotal Response Training focuses in behavioral techniques, it is loosely structured and it relies on naturally occurring teaching opportunities and consequences.
Benefits of PRT include providing the child the opportunity to choose a preferred incentive and it presents the child with an opportunity to make verbal attempts and gains. Furthermore, through PRT the child has the opportunity for growth in other areas where social interactions take place through those verbal opportunities during treatment. Overall, PRT is known as a positive outcome for treating children with autism. The goal of PRT is for children to learn functional communication and not rote learning. Most important, it has been proven that through PRT children’s motivation of social interaction improve in all pivotal areas including verbal communication, autonomy, self learning and simplification of new skills will be expand (Harrower & Dunlap, 2001; Voos et.al., 2012 & Baker-Ericzen, Stahmer & Burnes, 2007; Koegel, Vernon & Keogel 2009).

Applied Behavior Analysis (ABA) is an educational intervention approach that has been successfully used to support students with autism and it is a solid evidence based intervention approach (Stahmer, Collings & Palinkas, 2005). Through the use of the principles of ABA, children with autism do not only learn the immediate skills they need to be successful in their current educational setting but they will learn behaviors they will need in future situations. Applied Behavior Analysis relies on the belief that behaviors are learned and that they can be shaped through logical treatments of behavior values. Not only is PRT an intervention approach that relies on ABA; Discrete Trial Teaching is a treatment that also focuses on the principals of ABA. Discrete Trial Teaching breaks down the skills to be taught into smaller parts and it provides the child with many opportunities for practice, so that targeted skills are successfully gained (Holtz, Ziegert & Baker, 2004).
There are preventive strategies that have been proven to be successful when supporting students with autism in the school setting. Among those strategies it includes planning practices and supportive strategies during teaching. Social stories, visual schedules, picture exchange communication and environmental arrangements are examples of planning practices. When using preventive strategies, the teacher needs to be prepared before teaching. Being prepared includes planning, outcome options, environmental considerations, and grouping accommodations. Supportive strategies that are used during teaching include visual prompts, verbal rehearsal of rules or directions and peer-supportive prompting. Along with preventive strategies, corrective strategies can be used in negative situations in order for the teacher to redirect the student’s focus (Leach & Duffy, 2009).

Antecedent interventions support is evidence-based intervention designed to prevent and reduce challenging behaviors in students with autism. Antecedent interventions are used in Applied Behavior Analysis, Pivotal Response Training, Discrete Trial Teaching, natural reward intervention and other evidence-based intervention programs. Proactive is part of Antecedent interventions in which the teacher may modify routines, the student environment and the teacher may addressed challenging behaviors beforehand to avoid occurrences of challenging behaviors. Antecedent interventions are considered to be positive, they provide growth in social interaction, and encouragement and they strengthen the response of the child with autism (Leach & Duffy, 2009). The general education teacher may use antecedents such as priming, prompt delivery and picture scheduling (Crosland & Dunlap, 2012; Holtz, Zeigert & Baker 2004).
When using Priming as an antecedent, the general education teacher previews information or activities where the targeted child may be predicted to have difficulties. By previewing the information or activities, the child will have greater opportunities to be successful in the classroom. Part of priming may include prompts for routines, visual schedules, self-management strategies and peer-mediated interventions. Priming has been effective in increasing social interaction in students with autism placed in inclusive classrooms. When students self-manage their behavior, it helps them discriminate appropriate behaviors, make evaluations of their behaviors, manage their behavior over time and reinforce their behavior. Behavior learned through self-management help students become independent and responsible. Finally, when students with autism are given the opportunity for peer-mediated intervention, they become less dependent on adults (Harrower, Dunlap, 2001; Crossland & Dunlap, 2012).
Chapter 3

Methodology

The purpose of this quantitative research was to determine how general education teachers in a local elementary school perceive their own ability to educate students with Autism Spectrum Disorder (ASD) mainstreamed in their classrooms. In addition, this research explored if a staff development workshop would effectively support the general education teachers in increasing their perceived abilities in supporting students with ASD. In order to make this research possible, school and classroom observations needed to take place, data were collected through a demographic survey, a pre and a post survey, research was done based on observations and survey results and a workshop was developed and presented.

Setting

The setting for this research was a comprehensive K-3rd elementary school located in an agriculture community. The school has 435 students and a total of eighteen teachers. Average class size is 23. The school does not have a cafeteria and students bring their own lunches. The school has a special education inclusion Learning Center model that serves students with mild/moderate disabilities. There is only one Special Education teacher at the school and four paraprofessionals. All but one paraprofessional are assigned to work one-on-one with a student and the other paraprofessional supports the resource students. Student demographics consist of Asian (12%), Black (0.48%), Hispanic (10.24%), Multiple Race (1.90%), Native American (0.48%), and White (75.24%), Female (46%) and Male (54%).
Participants

The participants in this study were seventeen K-3rd teachers. All teachers were females except for one. The number of years teachers have been teaching range from four years to twenty-eight years. Teachers have experience in teaching grade levels from preschool through 10th grade. There was one general education teacher who taught as a resource specialist in the past. Four of the ten teachers that responded have Masters degrees. The Masters degrees held were in education, administration and curriculum and instructions (See Table 1).

**Table 1. Demographic Survey**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many years have you been teaching?</td>
<td>16.5</td>
</tr>
<tr>
<td>How many grade levels have you taught?</td>
<td>4.6</td>
</tr>
<tr>
<td>How many special education classes were you required taking through your teacher program?</td>
<td>1.2</td>
</tr>
<tr>
<td>Do you hold a Master's degree?</td>
<td>0.4</td>
</tr>
<tr>
<td>How many Professional Development activities or courses in special education did you participate in over the three years?</td>
<td>1.1</td>
</tr>
<tr>
<td>How many students with ASD have you had placed in your classroom in the last three years?</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Data Collection

School and classroom observations took place in order to identify an area of need when supporting students with ASD. After identifying an area of need, a demographics survey was an important part of this research to find out background information of the participants. Furthermore, pre and post surveys were essential instruments to measure
teacher ability levels of working with students with ASD. The pre and the post surveys were analyzed at the end to compare teacher growth in comfort levels regarding working with students with ASD. In addition, the pre-survey was an essential instrument for the development and implementation of the staff development workshop.

Teacher pre and post surveys were developed through https://surveymonkey.com. The purpose of the surveys was to find general education teachers perceived ability in educating students with ASD and to collect teacher concerns and areas of need in order to include in a staff development workshop. Both the pre and post surveys were Quantitative Likert Scale questions (Minner, 2002) and measured comfort levels of working with students with ASD who display challenging behaviors. The pre and post surveys included the same rating questions and the results were compared and analyzed at the end of the study to measure teacher comfort growth of working with students with ASD. Surveys were delivered and collected via email through a connecting link to SurveyMonkey.

**Identifying An Area Of Need**

The school in focus has been experiencing an increase number of students with ASD. All students with ASD attending the school are placed in the general education setting; therefore, focusing on supporting students with ASD was identified as an area of need. All of the ASD students have an Individual Learning Plan (IEP). The special education teacher provides students with ASD classroom support in the areas identified on their IEPs, but the student support was not enough. Through her observations, the special education teacher identified that general education teachers needed further professional development on teaching with students with ASD. Observations included
teachers lacking patience with the students with ASD and general education teachers calling the specials education teacher or the instructional assistants to come into their classroom to support them with students' tantrums or defiant behaviors.

**Demographic Survey**

A demographic survey was created using Microsoft Word to find out teacher knowledge with ASD and teacher background information. The demographic survey included a total of six basic questions. A hard copy of the demographic survey was given to the teachers and once they were filled out, they collected. Survey results were then analyzed and transferred into a table using a Microsoft Word Document (see Table 1).

**Baseline Pre-survey**

The developed and administered pre-survey for general education teachers was used to identify what they see as specific challenging behaviors in students with ASD and how comfortable they felt when working with students with ASD. As mentioned before the survey was developed through Survey Monkey. The questions on the survey were also based on general education teacher needs as observed by the special education teacher. Some questions were open-ended questions and once again some were Likert Scale questions.

Data collected from SurveyMonkey were analyzed. The special education teacher and the program specialist from the local Special Education Local Plan Area (SELPA) analyzed the collected data and focused on the most common behavior concerns and teacher needs. Survey results were use as a pretest to determine general education teacher knowledge and comfort level of working with students with ASD. Pre-survey was also
used as a guide for researching interventions and developing the workshop to support teachers.

Research

After the pre-survey was delivered and responses were collected and analyzed, research on evidence based strategies and practices was done. Other research included characteristics of challenging behaviors in students with ASD and current law in educating students with ASD. Scholarly journal articles were researched using Google Scholar, ERIC and Academic Search Premier (Ebsco) from the California State University, Monterey Bay (CSUMB) library. Furthermore, books from the CSUMB library were also checked out for research. Other websites such as Wrightslaw Special Education Law and Advocacy, Autism Speaks and The National Professional Development Center on Autism Spectrum Disorders were used for further research for this study.

Materials

In order to successfully develop this workshop, a computer was needed to be able to do research of videos containing relevant scenarios. The computer was also used to search for articles that answered teacher concerns and to find evidence base strategies and interventions to support students with ASD. In addition, the computer was used for the development of the surveys and the PowerPoint presentation. A computer overhead was used to display the PowerPoint presentation into a wall screen. Paper was needed to printout handouts of the PowerPoint as well as pencils for note taking.
Intervention Workshop

Collaboration between the program specialist and the special education teacher took place once pre-survey data was collected. Based on surveys results a PowerPoint presentation was developed for the staff development workshop. Points covered in the PowerPoint included what ASD is, symptoms, California education code eligibility criteria and samples of behavior using www.autismspeaks.org/what-autism/videoglossary. Other information included 24 evidenced-based practices from the National Professional Development Center (NPDC) on ASD, including a definition for focused interventions (Odom, Colett-Kingsberg, and Roger & Hatton, 2010). A few samples of the 24 evidenced-based practices were included in the PowerPoint to give teachers some suggestions on what those strategies look like. The program specialist and the special education not only collaborated in preparing the PowerPoint presentation but also collaborated in the presentation of the workshop. Other researched video scenarios of challenging behaviors displayed by students with ASD that were provided during the workshop, included videos from www.autismspeaks.org and http://www.utube.com/watch?v=GsHw8hu69cc that focused The Autism Speaks videos were created for training purposes only and cannot be duplicated (2014). Permission to use videos was granted by the Florida State University Autism Institute and all credit is given to them. Videos were only linked directly to the computer being used at the time of training.

Post-survey

Post-survey followed after the workshop training. The post-survey was a duplicated of the pre-survey to evaluate teacher growth in comfort levels of working with
students with ASD. Three out of the ten questions did not rate comfort levels. The three questions were changed to answer the effectiveness of the workshop and what more teachers would like to learn about working with students with ASD. Survey Monkey summarized the results of the post-survey and data was evaluated by the special education teacher to see if there was an increase on the teachers’ comfort levels of working with students with ASD.

Data Analysis

After the demographic and pre and post survey were collected, Siedman’s qualitative research approach was utilized to analyze the results (2006). To start with, one must keep in mind what is being measured. In this case, growth in general education teacher comfort level of supporting students with ASD is being measured. The demographic survey was an important instrument to know who your participants are. The pre-survey establishes the baseline, the teacher workshop is the intervention and the post-survey measures growth after the intervention has been implemented.

The demographic survey was an essential part of the measuring comfort teachers’ levels. One must first know who their participants are in order to have some kind of hypothesis. Questions like; are veterans teachers more comfortable and capable of working with students with ASD than newer teachers or are teachers with master’s degrees more comfortable and capable of working with students with ASD than those with out a master’s degree? A table using Microsoft Word was created to record the demographic survey responses (See Table 1).

Percentages created by Survey Monkey for both the pre and post surveys were combined into an outline using Microsoft Word. The outline shows percentages of
growth for individual questions and not for an individual person. Furthermore, Individual teacher responses were taken from Survey Monkey. Since questions were rating scales, numbers were given to the ratings (1 not comfortable, 2 slightly comfortable, 3 moderately comfortable and 4 extremely comfortable). The data were then put into an Excel Spreadsheet to measure individual teacher growth, then the data were transferred into a t-test correlated Sample using http:\vassastats.net\tu.html.
Chapter 4

Results

Overview

The purpose of this research was to find out how general education teachers in a local K-3rd grade elementary school perceive their own ability to educate students with Autism Spectrum Disorder (ASD). Furthermore, this research explored if a staff development workshop would effectively support the general education teachers in increasing their perceived abilities in supporting students with ASD. In order for the development of this research to be effectively conducted, three focused questions needed to be developed and answered. The questions were developed based on concerns that the special education teacher had experienced at the school in focus. The research questions were:

1. How do general education teachers perceive their own ability to educate students with Autism?
2. What types of student behavioral issues do general education teachers consider to be most essential to include in a training workshop designed to help them support their students with ASD?
3. Does a workshop designed to meet their identified needs impact their perceived abilities?

Demographic Survey

A hard copy of the demographic survey was given to sixteen teachers. Ten of the sixteen teachers responded. The number of years teachers have been teaching range from four years to twenty-eight years. The grade levels taught by the teachers ranged from pre-
school through 10th grade but all teachers have a greater number of experience teaching elementary school age children. One general education teacher has a special education background. Four of the teachers have Masters degrees.

Teachers were asked how many students with autism they’ve had placed in their classroom in the last three years. Only four claimed to have had students with autism placed in their classrooms. Teachers were also asked how many special education classes they were required to take through their teacher program. Two teachers claimed that they were not required to take any classes, three claimed only one class, two teachers claimed two classes, two teachers couldn’t remember and one claimed many because of her special education background. Only one of the teachers with a master’s degree was required to take special education classes. The other three were not required to take any classes. Lastly, teachers were asked how many professional development activities in specials education they had participated in the last three years. One responded that she/he only took district information but no formal courses, four responded zero, three responded one, one responded three, and one responded four.
Table 2.

<table>
<thead>
<tr>
<th>Pre and Post Survey Question</th>
<th>Pre-Survey</th>
<th>Post-Survey</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, how comfortable do you feel working with students with Autism when placed in your classroom?</td>
<td>3.11</td>
<td>3.11</td>
<td>0</td>
</tr>
<tr>
<td>How comfortable do you feel with their lack of attention?</td>
<td>2.65</td>
<td>2.87</td>
<td>.22</td>
</tr>
<tr>
<td>How comfortable do you feel with their non-compliant behavior?</td>
<td>2.76</td>
<td>2.76</td>
<td>0</td>
</tr>
<tr>
<td>How comfortable do you feel with their frustrations displayed by tantrums, aggression, or &quot;tuning out&quot;?</td>
<td>2.22</td>
<td>2.44</td>
<td>.22</td>
</tr>
<tr>
<td>How comfortable do you feel supporting them when they don't respond appropriately to conversational opportunities?</td>
<td>3.11</td>
<td>3.11</td>
<td>0</td>
</tr>
<tr>
<td>How comfortable do you feel supporting them when dealing with repetition of sounds both immediate and delayed referred as &quot;echolalia&quot;?</td>
<td>2.98</td>
<td>3</td>
<td>.02</td>
</tr>
<tr>
<td>As a general education teacher, how much training have you had in the area of Autism?</td>
<td>2.22</td>
<td>2.98</td>
<td>.76</td>
</tr>
<tr>
<td>How comfortable do you feel dealing with their lack of responses to verbal instruction?</td>
<td>3.22</td>
<td>3</td>
<td>-.22</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>2.78</td>
<td>2.91</td>
<td>.13</td>
</tr>
</tbody>
</table>

**Analyzing Pre-Survey And Post-Survey Questions**

Question 1: Overall, how comfortable do you feel working with students with Autism when placed in your classroom? There was no growth on this question. The overall pre and post mean was 3.11. Teachers’ overall comfort level of working with students with autism when placed in their classroom remained the same before and after the workshop training. To take it a step further, individual teacher responses were looked at. Five teachers rated themselves the same for the pre and the post survey. Two teachers’ scores went down and two teachers, scores went up.
Question 2: How comfortable do you feel with their lack of attention? There was a .22 increase difference. The pre-survey mean score was 2.65 and the post survey was 2.87. The increased comfort level on how comfortable teachers felt when working with ASD students’ lack of attention after the implementation of the workshop was minimal. When looking at individual teacher responses, seven teachers rated themselves the same on the pre and post survey and only two teachers’ scores went up.

Question 3: How comfortable do you feel with their non-compliant behavior? There was no growth on this question. The overall pre and post mean was 2.76. Teachers’ overall comfort level of non-compliant behavior displayed by students with autism remained the same before and after the workshop training. When looking at individual teacher responses, seven teachers responses stayed the same for both the pre and the post, one teacher score went up and one went down.

Question 4: How comfortable do you feel with their frustrations displayed by tantrums, aggression, or "tuning out"? There was an increase of .22 for question four. The mean for the pre-survey question was 2.22 and the post-survey mean was 2.44. The increased comfort level on how comfortable teachers felt when dealing with students’ frustration displayed by tantrums, aggression, or “tuning out” minimal. When looking at individual teacher responses, four teacher responses stayed the same for the pre and the post survey, three went up and two responses went down.

Question 5: How comfortable do you feel supporting them when they don't respond appropriately to conversational opportunities? The mean scores remained 3.11 for both the pre and the post survey. Teachers’ comfort level of supporting students with ASD who do not respond appropriately to conversational opportunities remained the same.
When looking at individual teacher responses, six teachers score remain the same for the pre and the post survey, two teacher scores went down and one went up.

Question 6: How comfortable do you feel supporting them when dealing with repetition of sounds both immediate and delayed referred as "echolalia"? There was an insignificant increase of .02 for supporting students with ASD when they display repetition of sounds both immediate and delayed referred as "echolalia". The pre-survey mean was 2.98 and the post was 3. When looking at teacher individual responses, four teachers rated themselves the same for both the pre and the post survey, three teacher scores went up and two went down.

Question 7: as a general education teacher, how much training have you had in the area of Autism? There was a significant increase of .76. The pre-survey mean was 2.22 and the post was 2.98. The training workshop increased the number of training teachers had in the area of Autism. When looking at individual responses, seven responses went up, one went down and one remained the same score.

Question 8: How comfortable do you feel dealing with their lack of responses to verbal instruction? The results for dealing with lack of verbal instruction were negative .22. The pre-survey question mean was 3.22 and the post-survey mean was 3. When looking at individual teacher responses, three teachers rating scores went down, two went up and four went down.

The overall comfort level average of supporting students with autism with challenging behaviors when mainstreamed in the general classroom increased by .13. The pre-survey mean was 2.78 and the post was 2.91.
Correlated Sample T-Test

There was not a significant difference in the scores for the pre and post survey after an intervention workshop level 1 (M=2.7837, SD=1.0958) and level 2 (M=2.9088, SD=0.327) conditions; one-tailed, p=0.1327.

<table>
<thead>
<tr>
<th>Comfort Levels</th>
<th>N</th>
<th>Mean</th>
<th>Deviation</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>8</td>
<td>2.7837</td>
<td>1.0958</td>
<td>&gt;0.1327</td>
</tr>
<tr>
<td>Post-test</td>
<td>8</td>
<td>2.9088</td>
<td>0.3461</td>
<td></td>
</tr>
</tbody>
</table>

Autism Awareness Workshop

The workshop was implemented by special education teacher with the support of the Program Specialist from the local Special Education Local Plan Area (SELPA). All participants but one were present and three third grade teachers had to leave the workshop after the first twenty minutes because they had to attend another district meeting. Other staff members were invited to attend and participate in the workshop, they included two-yard supervisors, a librarian, a speech therapist and three instructional assistants.

The workshop started with an introduction of the topic and names of the presenters. After the introductions were given a video from the Autism Speaks website was shown to introduce Autism Spectrum Disorder (ASD), the warning signs, diagnoses, complications and other disorders under the umbrella of ASD. After the video, a definition of ASD was given followed by updated information under the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), which is a classification and diagnostic tool updated in the

Further characteristics and symptoms of autism were introduced including a California education code eligibility criteria for autism. Samples of behaviors seen in students with autism followed. Thereafter, videos clips of behaviors seen in students with autism were played during the workshop. Provided videos were uploaded from the Autism Speaks video glossary website. Following the videos, evidenced-based practices were introduced from the National Professional Development Center (NPDC) (Odom, Colett-Klingenberg, Rogers & Hatton, 2010).

Some evidenced-based strategies were introduced during the workshop. They included visuals schedules using icon boards, visual schedules using pictures and visual schedules using a behavior plan. Other visual support included emotion ring, ambassador bracelet for following routine steps, and visual support for finding a friend during recess, visual support for classroom rules, visuals boundaries and task analysis. Finally, suggestions on how to create a sensory enriched classroom were given.

**Summary**

This project focused on the effectiveness of developing an Autism Spectrum Disorder (ASD) awareness workshop to support general education teachers who support students with ASD placed in their classrooms. Surveys were given to measure the effectiveness of the workshop. There was no significant improvement noted in the surveys through teacher responses and increase of percentages.
Chapter 5

Discussion

The purpose of this study was to evaluate how general education teachers in a local elementary school perceive their own ability to educate students with Autism Spectrum Disorder (ASD) and what types of student behavioral issues they consider to be most essential to include in a training workshop designed to help them support their students with ASD and if the workshop designed to meet their identified needs impact their perceived abilities. A baseline was determined through the use of a qualitative pre-survey. The survey measure comfort levels of general education teachers who work with students with ASD who display challenging behaviors. After baseline was determined, the development and implementation of ASD awareness workshop followed. A post-survey proceeded after the workshop to measure if the effectiveness of the workshop supported general education teacher needs when supporting students with ASD.

Before baseline was determined, a six question demographic survey was given to the sixteen participants to find out background information of the participants. Out of ten teachers that responded only one had a special education background. All participants had more than four years of experience teaching ranging from grades pre-k through 10th grade. Four of the ten teachers that responded had Masters degrees.

A consistent number of ten participants responded to the Qualitative pre-survey to determine baseline. The survey included Likert-style questions rating levels of comfort when working with ASD students who display challenging behaviors. A couple of open-ended questions were included in the pre-survey to determine teacher needs.

In order to develop a productive workshop to support general education teachers
with evidence-based strategies to support students with ASD database research was conducted. Databases accessed were Google Scholar, ERIC, and Academic Search Elite (Ebsco). Following the workshop, a post-survey similar to the pre-survey was sent to the participants to measure growth in confident levels and measure the productiveness of the workshop.

When analyzing the end results of this study, it became clear that general education teachers lack the training and skills to work with students with ASD. During the workshop there were many questions asked especially around the survey questions. Teachers wanted examples of certain displayed behaviors and intervention so they can use in their classrooms to support their students. All of the questions asked by the teachers indicated teachers had an opportunity re-evaluate their perceived abilities of working with students with autism who display challenging behaviors. This suggests the workshop designed to meet teachers identified needs did have some impact. Additionally, after the workshop some teachers requested that they get more training through out the school year. One particular teacher suggested that an autism awareness workshop be given at the beginning of each school year so that they can start interventions as early as possible.

Teachers’ perceived ability of working with students with autism who display-challenging behaviors was based on their ability to deal with challenging behaviors displayed by students with out disabilities. This discipline issue was a concern raised during the workshop. All of the students with ASD mainstreamed in their classrooms are high functioning students, which may make it more difficult to see that there is a disability present. Do to the lack of understanding of what autism is, teachers often
approach behavior challenges as behavior problems or "students being bad". In order for teachers to understand why their behavior strategies don’t work with students with autism, they first needed to understand what autism is. The workshop presented teachers with a thorough definition of autism and the characteristics.

The definition of autism given to teachers came from scholarly articles. All articles defined autism as a neurological disorder. This neuro-developmental disorder interferes with multiple areas of the central nervous system causing deficits in processing and understanding information. The word “spectrum” is not a single disorder, meaning that there is a variation of behavior symptoms. The main difficulties seen in students with autism include social interaction and speech and language development. Due to deficits in language and communication students will display challenging behaviors.

Research findings support the outcome of this research (Leach & Duffy, 2009). When teachers were asked how many classes they were required to take in special education as they went through their teacher program and how many workshops on autism had they attended in the last three years. The responses were that their training and their special education class requirements were minimal or none. McDonell et. al., (2008) confirm that general education teachers do not have the training skills to work with students with ASD. Furthermore, they extend the idea on their findings that there is a shortages and attrition among trained professionals that can work with students with ASD.

Researched interventions presented in the workshop were researched evidence-based practices. Interventions found to be especially successful to support students with autism included Activities under Pivotal Response Training (PRT) and Applied Behavior
Analysis (ABA). RPT was build on the ideas of ABA in which one must focus in understanding the problem causing the behavior as well as looking at the environment to make modifications needed in order to support the student of focus. This includes targeting social communication, providing predictability for students to increase a structured learning environment, providing positive behavioral supports for communication, activity transition and emotional regulation and activities need to be meaningful and relevant in order to motivate and engage students. Finally through out research best practices included inclusion of students with typical peers.

Results for not providing students with proper support can have devastating consequences (Twachtman-Cullen, 2000; Atwood, 2003). First, students may become victims of bullying in the upper grades. Second students can experience anxiety and depression causing students to have self-injurious behaviors. Further more, students may never learn the social and communication skills that will help them live productive lives in society.

In concluding this study with all the research and findings, it is evident that general education teachers are not getting the training they need in order to provide effective instruction to students with ASD. This is why teachers were inconsistent with their ratings of the pre and post survey as evident on table two in chapter four. In addition, the Correlated Sample T-Test showed that there was not a significant difference in the scores for the pre and post survey after an intervention workshop (see table 3). The sample test for this study was limited because of the sampling sizes but it was consistent with research finding. Teachers are lacking the training and the skills to support students with autism when mainstreamed in their classrooms. Teachers will discipline students with
ASD the same as when dealing with disruptive behaviors of the general education students. Teachers need more training than just one workshop or a class on autism. Autism numbers are rising and districts need to provide general education teachers the training in order to support students with autism placed in the Least Restrictive Environment as mandated by the Individuals with Disabilities Education Act (IDEA) of 2004.

**Limitations**

There were a few limitations in this research. The number of participants itself was a limitation because the numbers of participants responding to the pre and post surveys was inconsistent, but individual teacher response from both surveys were taken in order to get accurate scores. Another limitation was that not all participants were present for the workshop or some were there for a limited time. The surveys themselves were a limitation because Survey Monkey only allows ten free questions. Both demographic survey and pre-survey were broken into two separate surveys due to the limitation of the number of questions allowed in Survey Monkey.

**Implications for Practice and Research**

Based on the collected data, this study suggests that general education teachers lack the necessary skills and training to support students with autism mainstreamed in their classrooms. Research confirms that not only general education teachers are experiencing the lack of skills and training to support students with ASD but also special education teachers and paraprofessional (McDonell et. al., 2008; Crosland & Dunlap 2012). Leach & Duffy report that due to the rising numbers of students with ASD mainstreamed in the general education classrooms and the challenges that come with supporting the students;
there is a demand for hiring highly qualified special education teachers and other professionals (2009).

Through the data collection of this study, participants felt that the most challenging behaviors displayed by students with ASD include tantrums, aggression, or "tuning out", lack of attention and non-compliant behavior. The Oregon Department of Education states that communication impairments, sensory abnormalities and the lack of social interaction, will cause a child to manifest difficulties in processing information, therefore students will have challenging behaviors (2003). Crosland & Dunlap claim that there are many challenging behaviors displayed by students with ASD, but not all students display the same behaviors. Do to the many challenging behavior displayed by individual students with ASD is the reason why working with students with ASD is so challenging. Furthermore, there is not a "fit all" intervention model and interventions used need to constantly be modified for every ASD child (2012).

After looking at the results, it was noted that some comfort levels scores on the post-survey increased and some decreased. The scores that increased indicate that the training workshop on ASD was helpful in increasing some general education teachers’ comfort level of working with students with ASD. The scores that decreased suggest that the some teachers over estimated their perceived ability to educate students with ASD. Once the workshop was presented, those teachers that over estimated their ability levels had an opportunity to re-evaluate their ability levels of working with students with ASD with challenging behaviors this is why it was concluded that the rating scores went down.

To finalize this study and get a comprehensive understanding of the end results, a Correlated Sample t-Test was conducted to show if there was an increase in general
education teacher perceptions of working with students with ASD who display challenging behaviors after the implementation of an ASD training workshop. The outcome of the t-Test results suggests that there is no significant difference. We can say that the concluding results show that, “You don’t know what you don’t know”.

Conclusion

The results of this study can be useful in developing further training in ASD to further support not only the general education teacher, but students with ASD themselves when placed in the Least Restrictive Environment (LRE). The continuing training will also meet the federal law mandates under the Individuals with Disabilities Education Act (IDEA) of 2004 that requires that “all” students with learning disabilities get a “free and appropriate education” in the LRE. Research that was done to include in the workshop to target what general education teachers consider as challenging behaviors, was useful and helpful to provide the support general education teachers needed in order to support students with autism placed in their classrooms. All interventions presented in the workshop were researched evidence-based practices. Interventions found to be successfully used throughout research to support students with autism included Activities under Pivotal Response Training (PRT) (Koegel, Vernon & Koegel, 2009; Harrower & Dunlap, 2001) and Applied Behavior Analysis (ABA) (Stahmer, Collings & Palinkas, 2005).
Reference


Ledoux, Stephen F. (2012). Behaviorism at 100: Over its second 50 years, the study of behavior evolved to become a discipline, behavioral, independent of psychology. *American Scientist*, 100, (1), 60.


Appendix A

PowerPoint Presentation
Autism Spectrum Disorder (ASD)

- Autism is a spectrum disorder that is neurological and incorporates conditions which previously were described as Autistic Disorder, Asperger's Disorder, or Pervasive Developmental Disorder Not Otherwise Specified.
- ASD symptoms must be present in the early developmental period.
- Symptoms cause significant impairment in social, occupational, or other important areas of functioning.
- These disturbances are not better explained by intellectual disability. ASD can exist with ID, speech-language impairment, anxiety disorders, ADHD, and epilepsy.
- ASD exists on a continuum of severity.
- From: [www.autismspeaks.org](http://www.autismspeaks.org)
+ Symptoms Characteristic of ASD

- Persistent deficits in social communication and social interaction across multiple contexts
  1. Deficits in social-emotional reciprocity ranging from abnormal social skills and/or lack of gross social skills, to reduced sharing of interests, to failure to initiate or respond to social interactions.
  2. Deficits in nonverbal communicative behaviors used for social interaction ranging from poorly integrated verbal and nonverbal communication, to the lack of eye contact, body language or deficits in understanding and use of gestures to total lack of facial expressions and nonverbal communication.
  3. Deficits in developing, maintaining, and understanding relationships ranging from difficulties adjusting behavior to suit various social contexts to difficulties in sharing imaginative play or in making friends.

+ Symptoms Characteristic of ASD

- Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following:
  1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., hand flapping or a奇特 objects, repetitive whole-body movements, parrot-like recitations).
  2. Insistence on sameness, rigid adherence to routines, or rigidly maintained ways of doing things (e.g.,ệt preferred special routines, outdoor play preferences, repetitive speech patterns, and a literal interpretation of others' directions).
  3. Literally repeated behavior (e.g., tire spin, trip, or repeat elements of a play set).

+ California Education Code

Eligibility Criteria: Autism

- A student exhibits any combination of autistic-like behaviors including, but not limited to:
  1. An inability to use oral language for appropriate communication
  2. A history of extreme withdrawal or avoiding people
  3. An obsession to routines or schedules
  4. Extreme preoccupation with objects or inappropriate use of objects or body parts
  5. Extreme resistance to change
  6. Self-injurious behavior
  7. Self-stimulating stimulative behavior
Samples of Behaviors
Video Links from Autism Speaks
www.autismspeaks.org/what-autism/video-glossary

Communication: Repetitive use of language Echolalia 2
Regulatory and Sensory Systems: Over reactive to Sensory Input 3

ASD Interventions: Evidenced-Based Practices
NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON ASD (NPDC)
- In 2006, the NPDC conducted an extensive review of the autism intervention literature published between 1997-2007
- NPDC identified 24 practices that meet criteria for evidence-based practices for children and youth with ASD
- Note: Literature from 1990-2010 is currently being reviewed

Evidenced-Based Practice
NPDC Definition
"Focused interventions that:
Produce specific behavioral and developmental outcomes for a child
Have been demonstrated as effective in applied research literature
Can be successfully implemented in educational settings"

(Östrem, Golter-Klingenberg, Rogers, and Nation, 2010)
Visual Supports

Definition

- Visual supports are any tool presented visually that supports an individual as he or she moves through the day. They might include pictures, written words, objects from within the environment, schedules, labels, organization systems and scripts.

Visual Schedule

Icon Board
Visual Boundaries
Defined Seating Space

Task Analysis
Definition

- Task Analysis is the process of breaking a skill down into smaller more manageable components
- http://www.youtube.com/watch?v=Calher5uH6oc
+ Task Analysis

+ Video Modeling

Definition

- Video modeling is a mode of teaching that uses video recording and display equipment to provide a visual model of the targeted behavior or skill

- [Link](http://www.youtube.com/watch?v=JrlYHFpdS5c)

- [Link](http://www.youtube.com/watch?v=3KZEVYbbF5c&list=Pll3SFFZCjLF114kN&index=1)

+ HOW TO CREATE A SENSORY-ENRICHED CLASSROOM

- Seating options:
  - Bean bag chairs
  - Therapy balls
  - Move and Sit (e.g., beanbag chair, etc.)
  - Soft cube chairs (little kids)
  - Inflatable duvets

- Vestibular input:
  - Mini trampoline
  - Teacher-directed movement breaks
  - Sit and Spin (little kids)
  - Egg chairs (little kids)
  - Therapy balls
HOW TO CREATE A SENSORY-ENRICHED CLASSROOM

- **Proprioception** - opportunities to move against resistance - haul books across classroom, push library cart - heavy/weighted items (vests, weighted lap blankets, weighted backpacks, weighted neck snakes); pencils w/ nubbies, bean bag chairs, chair push ups

- **Tactile** - basket of textured toys, brushes, a variety of texture during art and play, feathers on the end of pencils, textured pencils

- **Auditory** - soothing music (played for the entire classroom), filtering headphones for test taking/recess/lunchroom or classrooms with echoing problems.

- **Visual** - visual timers, electric traffic light signals, pictures to label centers, visual schedules.

- **Oral sensory** - candy, chewy tubes/straw, water bottles with straw, blow toys/games, vibrators.

- **Olfactory sensory** - lavender spritzer, avoid wearing perfume, utilized scented stickers, use scent free soaps in the classroom.
### Reasons why it's so hard for Students with ASD to be Successful in School

- Abilities are uneven
- Difficulty paying attention
- Learning slower
- Extra time to process is necessary
- Difficulty performing upon request
- Generalizing is difficult
- Transitions are hard
- Remembering things easily
- Motivation and performance can be inconsistent
- Difficulty to take someone else's perspective
- Difficulty seeing the big picture
- Difficulties with executive functioning
- Sensory integration versus problematic behavior

### Useful Websites

- CAPTAIN (California Autism Professional Training and Information Network)
  - [www.captain.ca.gov](http://www.captain.ca.gov)

- Autism Speaks
  - [www.autism-speaks.org](http://www.autism-speaks.org)