CHARACTERISTICS OF AN EFFECTIVE TRAINING PROGRAM FOR REGULAR EDUCATION TEACHERS OF STUDENTS WITH AUTISM

By

Daniel J. Thornton

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN EDUCATION AT NORTHERN MICHIGAN UNIVERSITY

December 8, 2011

APPROVED BY: Derek L. Anderson, Ed.D.

DATE: December 13, 2011
Table of Contents

Abstract ........................................................................................................................................... 4

Chapter I: Introduction

  Statement of Problem .................................................................................................................. 5
  Research Question ...................................................................................................................... 6
  Definition of Terms ..................................................................................................................... 7

Chapter II: Review of Literature ............................................................................................... 11

  Autism .......................................................................................................................................... 11
    Behavioral Description .............................................................................................................. 12
    Diagnosis/Evaluation .............................................................................................................. 12
    Prevalence .................................................................................................................................. 13
  Current Professional Development / Trainings ........................................................................ 14
    Types of Professional Development ......................................................................................... 15
    Relationship to Special Education ........................................................................................... 15
  Professional Development/Trainings that Focus on Education Students with Autism in the general education setting ......................................................................................... 16
    What is Available? .................................................................................................................... 17
    Strategies .................................................................................................................................... 17
  Effective Practices ...................................................................................................................... 18
    Communication Issues ............................................................................................................. 19
    Motivational Issues ................................................................................................................ 19
    Instructional Formats ............................................................................................................... 20

Chapter III: Results and Analysis Relative to the Problem ...................................................... 20
Two Studies.................................................................................................20
Professional Development Study.................................................................21
Autism in the General Education Classroom Study.....................................24
Chapter IV: Recommendations and Conclusion........................................27
Recommendation.........................................................................................27
Areas for Further Research........................................................................28
Summary and Conclusion.........................................................................29
References.................................................................................................30
Appendix.................................................................................................33
Abstract

Despite the increasing number of students with mild to moderate autism being placed in general education settings, typically very little professional development is provided to general education teachers. This paper attempts to determine the most effective methods for educating students with autism in the general education classroom. It looks at various professional development opportunities and strategies that are offered in order to properly educate children with autism and to allow them to function with their peers to the best of their ability. This paper focuses on the history of autism, what educational strategies are currently available, what educational strategies work, and what could be done differently in the future in order to ensure that students with autism are being educated in the general education classroom in the best manner possible.
Chapter I: Introduction

Autism has been increasing at an alarming rate in recent years. The term “Autism” has been around for about 100 years; however, it was not commonly used to refer to children with behavioral and emotional problems in America until the 1940’s. Treatments for Autism have changed over the years with the most recent focusing on behavior therapy and highly controlled learning environments (Moores-Abdool, 2010). Autism affects a person’s ability to easily communicate with others. Some may be unable to communicate at all. Other symptoms of Autism may be interest in objects or specialized information, reactions to sensations, and ways of learning. Symptoms of autism are generally recognized early on. Milder forms of Autism, such as Asperger’s Syndrome may reveal themselves later as a child may have an inability to react to social cues and situations (Dunlap & Bunton-Pierce, 2000).

Statement of Problem

Most general education teachers have very little training in Autism. Veteran teachers may have had no undergraduate training in the area, and many districts have few professional development opportunities available to the teaching staff. With the number of children diagnosed with autism increasing rapidly, general education teachers are presented with an entirely new population of children they are responsible for educating, creating a dilemma in which many children with autism are overlooked in the general education setting and do not receive the appropriate education that they are entitled to according to their respective Individualized Education Plans, or IEPs. With the ongoing push for inclusion, general education teachers should be well versed in educating students with autism.

As class sizes continue to grow and funding continues to shrink, it is even more difficult for educators to find the time to individualize an educational program for students with autism in
the general education setting. Teachers and parents often face a great deal of frustration in this situation. The parents want what is best for their child, and the teachers may be unaccustomed to working with a child with autism. Another factor is that autism is not a disability that is only in urban areas. Autism can be found anywhere, including rural areas with limited resources. On top of all of these challenges, educators are faced with the reality that the guidelines and terminologies related to autism are changing constantly, making it very difficult to keep up with. General education teachers should have research-based trainings in order to improve their ability to educate students with autism in the general education setting.

**Research Question**

The research question of this study is: “What are the characteristics of an effective training program for regular education teachers in order to provide meaningful instruction for students with mild to moderate autism?” The idea of including students with autism in the general education setting has been a controversial topic (Harrower & Dunlap, 2001). More recently, mainstreaming students with special needs is becoming more common and is general practice at some schools. As this practice becomes more commonplace, the professional development opportunities and trainings must reflect the need to educate students with autism in the general education setting.

Some characteristics of a training program that focuses on educating students with autism should have are direct instruction strategies and managing problem behavior strategies, for example. Other areas such as adaptive life skills or sign language are harder to implement in the general education setting and may be taught in the special education classroom. The goal of an effective training program for general education teachers to teach students with autism should have some elements of both academic and functional life skills. The training program needs to
give the audience an extensive amount of background information regarding autism because this may not be common knowledge to the general education teacher. The program should then list several strategies that special education teachers are using in the classroom along with some ideas of how to implement these strategies, or scaled-down versions, in the general education classroom. Several scholarly journal articles were examined in order to come to a conclusion about what must be included in a training program in order for students with autism to be properly educated in the general education classroom.

**Definition of Terms**

**Autism** – Autism is a general term used to describe a group of complex developmental brain disorders known as Pervasive Developmental Disorders (PDD). The other pervasive developmental disorders are PDD-NOS (Pervasive Developmental Disorder – Not otherwise specified), Asperger’s Syndrome, Rett Syndrome, and Childhood Disintegrative Disorder. (autismspeaks.org)


(1) Autism spectrum disorder is considered a lifelong developmental disability that adversely affects a student’s educational performance in 1 or more of the following performance areas: (a) Academic, (b) Behavioral, (c) Social.

Autism spectrum disorder is typically manifested before 36 months of age. A child who first manifests the characteristics after age three may also meet the criteria. Autism spectrum disorder is characterized by qualitative impairments in reciprocal social interactions, qualitative impairments in communication, and restricted range of interests/repetitive behavior.

(2) Determination for eligibility shall include all of the following:
(a) Qualitative impairments in reciprocal social interactions including at least 2 of the following areas:

(i) Marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction.

(ii) Failure to develop peer relationships appropriate to developmental level.

(iii) Marked impairment in spontaneous seeking to share enjoyment, interests, or achievements with other people, for example, by lack of showing, bringing, or pointing out objects of interest.

(iv) Marked impairment in areas of social or emotional reciprocity.

(b) Qualitative impairments in communication including at least 1 of the following:

(i) Delay in, or total lack of, the development of spoken language not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mine.

(ii) Marked impairment in pragmatics or in the ability to initiate, sustain, or engage in reciprocal conversation with others.

(iii) Stereotyped and repetitive use of language or idiosyncratic language.

(iv) Lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level.

(c) Restricted, repetitive, and stereotyped behaviors including at least 1 of the following:

(i) Encompassing preoccupation with 1 or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus.

(ii) Apparently inflexible adherence to specific, nonfunctional routines or rituals.
(iii) Stereotyped and repetitive motor mannerisms, for example, hand or finger flapping or twisting, or complex whole-body movements.

(iv) Persistent preoccupation with parts of objects.

(3) Determination may include unusual or inconsistent response to sensory stimuli, in combination with subdivisions (a), (b), and (c) of subrule 2 of this rule.

(4) While autism spectrum disorder may exist concurrently with other diagnoses or areas of disability, to be eligible under this rule, there shall not be a primary diagnosis of schizophrenia or emotional impairment.

(5) A determination of impairment shall be based upon a comprehensive evaluation by a multidisciplinary evaluation team including, at a minimum, a psychologist or psychiatrists, an authorized provider of speech and language under R 340.1745(d) and a school social worker.

(Michigan Department of Education – Office of Special Education and Early Intervention Services)

Asperger’s Syndrome – Asperger’s Syndrome is a developmental disorder that affects a person’s ability to socialize and communicate effectively with others. Children with Asperger’s syndrome typically exhibit social awkwardness and an all-absorbing interest in specific topics.

(mayoclinic.com)

Diagnostic Criteria for 299.80 Asperger’s Disorder –

A. Qualitative impairment in social interaction, as manifested by at least two of the following:

(1) Marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction

(2) Failure to develop peer relationships appropriate to developmental level
(3) A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by lack of showing, bringing, or pointing out objects of interest to other people)

(4) Lack of social or emotional reciprocity

B. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:

(1) Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus

(2) Apparently inflexible adherence to specific, nonfunctional routines or rituals

(3) Stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)

(4) Persistent preoccupation with parts of objects

C. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning

D. There is no clinically significant general delay in language (e.g., single words used by age 2 years, communicative phrases used by age 3 years).

E. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behavior (other than in social interaction), and curiosity about the development in childhood.

F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia.

These definitions are courtesy of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders.
Chapter II: Review of Literature

Autism

Autism is a behavioral syndrome, meaning that the definition is based on patterns of behaviors that a person exhibits. Autism is not an illness or a disease. Autism is not contagious, and as far as we know, autism is not acquired through contact with the environment (Dunlap & Bunton-Pierce, 2000). Autism is a neurological disability that is present from birth and is apparent before the age of three. Autism affects the functioning of the brain, but the specific causes are unknown.

Individuals with autism vary widely in ability and personality (Dunlap & Bunton-Pierce, 2000). Some individuals can exhibit severe mental retardation and others can be extremely gifted. Many individuals with autism prefer isolation and tend to withdraw from social interaction. However, children with autism are not without hope. Through a quantitative research study involving 50 elementary age students with autism selected randomly, Vacca tested students’ ability to read prior to and after a reading intervention. Vacca (2007) suggested ten ways to improve the reading achievement of students with autism:

1. Create and plan active, authentic, directed, structured visual and purposeful instruction for children with autism.
2. Create a mindset that autistic students can learn.
3. Spark enthusiasm for learning when teaching reading to the autistic child.
4. Teaching reading skills to students with autism should be based on their interests and prior knowledge.
5. Help autistic students make connections to self, text, and the outside world.
6. Create multisensory instructional activities for children with autism that are consistent and repetitive opportunities for learning.

7. Model what the autistic students need to know and how they need to learn.

8. When possible, integrate language arts skills into content instruction.

9. Collaborate with colleagues when planning reading instruction.


**Behavioral Description**

Autism affects an individual’s ability to interact socially including difficulty with verbal and nonverbal communication. Additionally, people with autism tend to exhibit unusual, repetitive, and preservative movements (including stereotyped and self-stimulatory behaviors), resistance to changes in routines and in other features of their environments, apparent oversensitivity or under sensitivity to specific kinds of stimulation, and extreme tantrums, aggression, or other forms of acting-out behavior (Dunlap & Bunton-Pierce, 2000).

**Diagnosis/Evaluation**

The main source for diagnosing Autism is the Diagnostic Manual of the American Psychiatric Association. Diagnoses generally do not occur until a child reaches the age of three. Early intervention services may be provided under the label of “early childhood; developmentally delayed” without the formal diagnosis of autism. The diagnosis is often provided by developmental pediatricians, psychologists, child psychiatrists, or neurologists (Dunlap & Bunton-Pierce, 2000). A battery of developmental and educational evaluations is also conducted to help develop an appropriate intervention plan.

A study from the Douglas Developmental Disabilities Center by Handleman and Harris (2005) posited that an Applied Behavior Analysis may be very effective in changing the
lives of people with autism in a positive way. The participants of the study were children who were students at the DDDC’s pre-school program. These children entered the program with a mean age of 49 months and graduated the program with a mean age of 142 months. The mean score of the children on the Childhood Autism Rating Scale was 34.17, meaning that most children fell in the mild to moderate range of autism. They entered the program with the goal of gaining independence skills, allowing for productive living in the least restrictive environment.

Data was gained over the period by using numerous testing methods. The data has shown that most students show meaningful changes (Handleman & Harris, 2005). This article is relevant to the realm of autism, although it does not entirely emphasize assimilating children with mild to moderate autism into the general education setting. This is simply an example of how a structured behavioral program may allow children and adults with autism to function more independently on a daily basis.

**Prevalence**

Current data suggests that some form of autism may be present in as many as one person out of every 500. Other statistics suggest it could be as high as 1 in every 150. It is well established that autism occurs in four times as many boys as girls and that there are no known racial, social, economic, or cultural distinctions. Although it is possible that there are some genetic linkages with some forms of autism, there are not any known associations with cultural histories or practices (Dunlap & Bunton-Pierce, 2000).

**Current Professional Development/Trainings**

Current professional development opportunities and trainings for educators are generally aimed at instruction in the general education classroom. Some of the trainings may have a component of special education, such as “interventions for struggling readers,” for example.
However, the vast majority used during teacher in-service days fall into the category of general education simply because there are substantially more general education teachers and students. The idea becomes even more commonplace in rural areas where resources may be limited.

Murray, Ackerman-Spain, Williams, and Ryley (2011) described a process that was developed to empower parents and professionals through training and education. It was known as Project PACE and was designed to provide participants with basic facts about individuals with autism spectrum disorder and strategies for working with these individuals using collaborative partnerships. Once trained, these participants themselves become trainers who present the information to schools, community agencies, and support groups. The article described the planning, implementation, and evaluation phases of the project.

The participants were parents, teachers, social workers, counselors, and psychologists, all of which were volunteers. From the time period between 2006 and 2009 more than 4,435 people attended one or more of these trainings. This training was vital to the autism community because it allowed many people to be exposed to the world of autism by having the participants become trainers (Murray et al., 2011). There are now many similar programs across the country. One such program that is current taking place across the state of Michigan is the Statewide Autism Training (START) program out of Grand Valley State University.

Types of Professional Development

In-service training is the most common or conventional form of professional development. The trainings occur during a predetermined time during which a presenter leads and shares ideas and expertise to participant teachers. Various kinds of group based activities, presentations, and discussions may occur. It is considered a cost-effective model since large groups of educators are reached at once. The same knowledge is shared to all participants
Observation and assessment is another form of professional development which entails colleagues providing feedback about the performance of fellow educators. Both sides learn from the process. Further examples consist of the development/improvement process where teachers are called together to make decisions and changes in organizational plans, procedures, and activities as well as study groups and mentoring (Karimi, 2011).

**Relationship to Special Education**

Again, in-services and professional development trainings have largely been created in order to better serve the general education student population. The only way to attend a specific training regarding autism or autism in the general education setting is to leave the building in order to attend a workshop, where the information is more specific to the desired area. However, workshops tend to be expensive and a teacher must be out of the classroom in order to attend. This results in expenses for substitute teachers, mileage, and even lodging. Trainings such as these can be beneficial for improving a general education teacher’s ability to educate students with autism, but it is unlikely that general education teachers will attend them.

**Professional Development/Trainings that focus on educating students with autism in the general education setting**

Currently, there are an increasing number of professional development opportunities relating to autism in the general education setting. The trainings typically begin by providing background information about autism and then suggest some strategies and behavior modification systems that may be used in the general education setting. Many of them suggest interventions such as peer mentoring, pre task sequencing, and self-management strategies, to name a few. Interventions such as these can be effective provided the appropriate supports are in place. For example, some children with autism may need a one-on-one paraprofessional who is
trained in the content in order to assimilate into the general education setting. Every child is different, so it may take several attempts and a combination of strategies and supports in order to accomplish this goal.

One example of a training relating to students with autism comes from a study by Caballero and Connel (2007) which was designed to investigate the effects of social cue cards on the social communication skills of three preschool age children with autism spectrum disorder. Using a design that had multiple baselines across participant design, social cue cards were implemented and observation of the individual’s behavior was conducted. The results indicated that social cue cards were effective for improving the rates of social communication behaviors for all participants. Additionally, all three participants demonstrated maintenance skills at a two-week follow up session. The research generated here adds evidence that social cue cards may be a beneficial intervention for children with autism spectrum disorder in the general education environment. This study was quantitative in nature, utilizing several graphs and charts to display the information gained (Caballero & Connell, 2007). This study provides an excellent example of effective use of using cue cards for scheduling the daily activities of children with autism. A training that provided the bulk of the methodology and process for using cue cards for students with autism in the general education setting would be an excellent example of a beneficial in-service for general and special education teachers to attend.

What’s available?

The fairly recent surge in the number of reported cases of autism had produced a strong interest in autism spectrum disorder. With this newfound interest, several professional development opportunities are available for educators. Here are some examples of the trainings that are available to educators: “Research-Based Education Practices for Students with Autism
Spectrum Disorder”, “Activity Schedules: Helping Students with Autism Spectrum Disorder in the General Education Classrooms Manage Transition Issues”, and “Using Structured Work Systems to Promote Independence and Engagement for Students with Autism Spectrum Disorder”. The majority of professional development trainings suggest using a systematic approach when educating students with autism. They offer potential solutions and tips such as peer mentoring in order to effectively mainstream a child with mild to moderate autism into the general education setting.

**Strategies**

Some strategies that are used in order to educate children with mild to moderate autism in the general education setting consist of are thinking of each student as an individual, a child with autism can still contribute to the classroom environment by bringing their unique traits to the environment. A team approach can be effective as well. If several members of a group are providing input, the intervention strategies that are recommend will usually be more insightful. Appropriate expectations must be established and data collection is vital. Additionally, we must remember that social interaction is an enormous component of the educational experience.

In 2009, McCord researched students with autism in inclusive music classrooms. Three children with autism were selected voluntarily to participate in this study. The students used traditional and electronic instruments to communicate musical ideas through improvisation in the jazz style. The students were recorded while playing their instruments and several discussions with their parents and teachers took place. The data were analyzed on an individual student basis, which showed for all three students that music was a beneficial means of communication for students with autism. This study reinforces the power of music therapy in students with autism.

**Effective Practices**
If appropriate, systematic, and individualized teaching practices are utilized, educating students with autism can be successful. Here are some examples of appropriate instructional context (Dunlap & Fox, 1999).

1. Ensure that the student is in good health, free from pain and irritation, and in a safe, stimulating and pleasurable setting.
2. Provide structure in the environment, with clear guidelines regarding expectations for appropriate and inappropriate behavior.
3. Provide tools, such as written or picture schedules, to ensure that the flow of activities is understandable and predictable.
4. Base a curriculum on the student’s individual characteristics, not on the label of autism. A diagnosis of autism does not indicate what or how to teach.
5. Focus on developing skills that will be of use in the student’s current and future life in school, home, and community.
6. Carefully plan transitions to new placements and new school experiences usually require careful planning and assistance.
7. Encourage parents and other family members to participate in the process of assessment, curriculum planning, instruction, and monitoring. They often have the most useful information about the student’s history and learning characteristics, so effective instruction should take advantage of this vital resource.

Communication Issues

Students with autism have trouble communicating. Therefore, the classroom environment must be one where the day to day information and classroom expectations must be clearly presented in a manner that students with autism can easily understand.
Most students with autism will learn to use speech to communicate, but the student may still have a great difficulty in expressing their wants and needs. Visual systems, sign language, or augmentative devices may be required in order to effectively communicate (Kluth, 2003).

**Motivational Issues**

It is important that the classroom environment provides activities that are both interesting and motivating. Ensuring that a student is actively engaged is critical to effective instruction. When students have an opportunity to choose the activity, location, or materials for an instructional task, they are more likely to be engaged in the activity. A teacher must provide the student with frequent, meaningful reinforcement in order to sustain motivation (Dunlap & Fox, 1999).

**Instructional Formats**

Systematic instruction is used to provide instruction. Skills are taught by working closely with the student in order to establish appropriate behaviors. Skills are taught within relevant activities and across contexts, this increases the likelihood that the student will generalize the activity to outside of the school environment. Students with autism may also be taught in small groups effectively. In inclusive classrooms, nondisabled peers have been effective in providing instructional support. Cooperative learning groups have also been shown to be effective (Dunlap & Fox, 1999).
Chapter III: Results and Analysis Relative to the Problem

Two Different Studies

Two studies were examined in order to give greater insight into this problem. One focused on professional development and one focused on ways to include children with autism in general education classrooms. The first one on professional development is titled “The Effects of Professional Development Initiatives on EFL Teachers’ Degree of Self Efficacy”. This was written by Mohammad Nabi Karimi, from Razi University in Iran. The second journal article was titled “Including Children with Autism in General Education Classrooms: A Review of Effective Strategies”, written by Joshua K. Harrower and Glen Dunlap from the University of South Florida.

Professional Development Study

While the first study, “The Effects of Professional Development Initiatives on EFL Teachers’ Degree of Self Efficacy”, does not directly relate to Autism, it does give the reader a sense of what professional development opportunities do to improve teacher efficacy. In this study teacher efficacy is defined as a teacher’s judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated. The part of the statement “difficult or unmotivated” somewhat parallels behavior that children with autism may exhibit in the general education setting.

This study set about considering the potential of professional development in enhancing teachers’ beliefs about their teaching ability. It was a quantitative study, meaning that it employed mathematical models and other solid forms of data to determine the outcome. An instrument known as the Teacher Sense of Efficacy Scale was used in this study. Two groups of teachers were surveyed in this study: an experimental group and a sample of control teachers.
Both groups were classified as English as a Foreign Language Learners or EFL. The groups were administered a pre-test at the beginning of the study and a post-test at the conclusion. After the pre-test on self-efficacy showed no significant difference between the two groups, the teachers received three 16-session courses of professional development that followed five different models which included: in-service-training, fellow observation and assessment, the development and improvement process, mentoring, and study groups. The two groups were then compared on the post-tests. The results showed that the treatment teachers obtained significantly higher efficacy scores than the control group of teachers.

The sample demographic representation of this study consisted of 60 teachers. Their participation was voluntary. The methods of data collection that the authors used in the study consisted of primarily questionnaires in the forms of interviews and surveys. To further examine this study the methodology was reviewed. The participants of the study consisted of two groups of thirty, for a total of sixty, junior high school teachers from Western Iran. The age of the teachers in the study varied from 21 to 42 and included both male and females. One group of thirty participants was the treatment group, or the group that received the five professional development models. The other group of thirty was the control group which did not receive any training or professional development.

The teachers’ sense of self-efficacy was measured using the Teacher Sense of Efficacy Scale. The scale has 24 items which are assessed along a 9-point continuum with anchors at 1 - Nothing, 3 – Very Little, 5 – Some Influence, 7 – Quite A Bit, and 9 – A Great Deal. The procedure consisted of giving each team of thirty the Teacher Sense of Efficacy Scale to fill out. After it was shown that there was no significant difference between the two groups the experiment was carried out. The researcher taught the treatment group the three 16-session
courses that have been previously mentioned and the control group did not receive these trainings.

The researchers analyzed the data using two groups of matched T-Tests. The tests were used to investigate the difference between the pre and post test results of the two groups. The results of the independent samples test t-test indicated that there was no significant difference between the two groups, thereby allowing the researchers to begin the experiment. If equal variances were assumed between the two groups, the mean differences would be 2.66.

The equality of the two groups was also observed in the components of teacher efficacy. The results were once again very close. The mean difference for Efficacy for Student Engagement was .30, the mean difference for Efficacy for Instructional Strategies was 1.40, and the mean difference for Efficacy for Classroom Management was .96.

After running the experiment, the t-tests indicate a significant difference between the two groups. It shows that the professional development opportunities have had a significant effect on the improvement of teacher efficacy beliefs. The results from the post-test of teacher efficacy indicated that the mean difference for Efficacy for Student Engagement was 5.63, the mean difference for Efficacy for Instructional Strategies was 5.50, and the mean difference for Efficacy for Classroom Management was 5.96.

The effects of professional development initiatives on teachers’ sense of efficacy was tested again after a period of three months to see if the results would continue to be the same. The mean for the treatment group was 120.36 and the mean for the control group was 103.20. The standard deviation for the treatment group was 27.68 and the standard deviation for the control group was 31.76. The standard error mean for the treatment group was 5.05 and the standard error mean for the control group was 5.79. If equal variances are assumed the mean
difference is 17.16. These results show that the effects of professional development initiatives on teacher beliefs about their capacity tend to be highly stable over time.

The results of the study proved a significant effect of PD initiatives on enhancing EFL teachers’ sense of efficacy in teaching. It demonstrated that professional development can create a belief in teachers’ capabilities and can even significantly disrupt previously held beliefs in their teaching abilities. This study was an excellent example of a quantitative study that focused on professional development in regard to teachers’ self-efficacy.

This study showed that teachers of all subjects with different backgrounds are able to improve their teaching ability and, in particular, their self-efficacy with the help of a successfully implement and effective professional development program. This study shows that professional development opportunities could be particularly helpful in educating students with mild to moderate autism. Professional development opportunities that directly relate to educating students with autism would be beneficial and relevant to the topic of this paper. Additional research could include using larger sample sizes, different settings, different groups, and different survey methods. However, this study seemed to be valid and worthwhile.

**Autism in the General Education Classroom Study**

The second study examined was titled “Including Children with Autism in General Education Classrooms: A Review of Effective Strategies” by Joshua K. Harrower and Glen Dunlap. This article was less relevant to professional development and focused more on ways to effectively educate students with autism in the general education setting. Research on inclusion as an independent variable was reviewed as it related to social and academic outcomes. Next, successful intervention strategies were presented. These strategies included: antecedent procedures, delayed contingencies, self-management strategies, peer-mediated interventions, and
multi-component strategies. The study concluded with a discussion of areas for future research efforts in facilitating the inclusion of students with autism.

This study was more qualitative in nature that the previous study. It did not include any charts or data collection. It simply described several methods for including students with autism in the general education setting and gave a rationale for each one. The article stated that for inclusive placements to be successful, educators must have knowledge of and access to empirically validated strategies that will assist them in the process. In addition, the main purpose of this article is to provide strategies that can be individually tailored to meet the needs of students with autism in the general education setting.

Antecedent procedures that were mentioned in the article consisted of: priming, prompt delivery, and picture scheduling. Priming consists of previewing information or activities that a child is likely to have difficulty with before the child is actually engaged in that activity. Prompt delivery means providing prompts that supplement the general instruction routine. Picture schedules are used for transitioning. Picture schedules are often used as a strategy for increasing predictability and as an alternative for verbal and written communication. Picture schedules have been shown to be highly effective for children with autism. According to this study, results demonstrated that once a picture schedule was implemented, the students followed their schedules 90 to 100 percent of the time.

Self-management strategies have been shown to be effective by shifting some of the responsibility from the teacher to the student. Self-management consists of teaching the student to discriminate between appropriate and inappropriate behaviors, evaluate the students’ own behavior, monitor their behavior over time, and reinforce her or his behavior once the criteria has
been met. Research suggests that self-management strategies can eventually result in independent functioning for students with mild to moderate autism.

Peer-mediated interventions have been advocated as useful approaches for facilitating participation of children with autism in the general education setting. A prime example of peer-mediated intervention is peer tutoring. Peer tutoring consists of pairing two students together to work on any instructional strategy, with one student providing assistance, instruction, and feedback on the other (DuPaul & Eckert, 1998.) A number of researchers have focused on recruiting typically developing peers to be used as peer support for children with autism. In some circumstances, simply training nondisabled peers to interact with classmates with autism has been shown to improve spontaneous interactions between students with autism and their trained and untrained peers (Brady, Shores, McEvoy, Ellis, & Fox, 1987.) Another example of peer-mediated intervention is cooperative learning. Cooperative learning has been shown to increase the frequency, duration, and quality of social interactions by teaching social and academic skills to children with autism and their non-handicapped peers in cooperative groups in integrated settings.

The article goes on to state that inclusion for students with autism is important for education and socialization. Furthermore, research is also needed at the systems level, meaning that inclusion can only work well if the entire educational system buys into the philosophy. Lastly, the article suggests that research and knowledge about the area of autism is being gained on a frequent basis. Methodologies are changing very rapidly and we have much to learn with regard to educational strategies for students with autism.

The previous articles along with several other articles relating to autism in the general education setting and what professional development opportunities are available in the area lead
to the conclusion that several strategies are effective for including students with autism in the general education setting. The problem is that most general education teachers are unaware of effective strategies and do not have the time to attend extensive professional development opportunities; requiring them to be out of the classroom for an extended period of time.

One challenge with reviewing this article was that it consisted of no actual study; therefore, there were no participants or research methods used. This resulted in having no data to analyze. The findings were simply helpful strategies for working with students with autism. This article was incredibly relevant to my research paper, but if I was to select another article in the future I would choose a more appropriate one that was more in line with what one would expect from a traditional research article.
Chapter IV: Conclusion

Recommendation

The bulk of this paper was spent examining different methodologies for successfully including students with mild to moderate autism in the general education setting. Several methods have been proven to be effective. Some examples of these are peer-mediation and picture schedules. Special education teachers are more likely to have the background knowledge as well as the ability to effectively implement these education strategies. General education teachers have the ability to implement these strategies as well, but they may be limited due to lack of background knowledge or time constraints.

In order to deal with this situation effectively special education and general education teachers must be able to effectively work together as a cohesive unit. Teamwork should be utilized in order to benefit the student with autism in the general education setting. Additionally, general education teachers must be provided with ample time to attend professional development opportunities, particularly if a student with autism is currently in their classroom.

The two most powerful tools that are available to help a student with autism excel in the general education setting are peer-to-peer supports and picture schedules. Peer-to-peer supports should be utilized whenever possible. This increases tolerance and social interaction while allowing an opportunity for the student with autism to build independence as well. Picture schedules have been shown, when used properly, to be almost 100 percent effective. Picture schedules show the student with autism exactly what is coming next during a transition period. This is extremely helpful because they remove all doubt of what is coming next without using methods that may not properly convey the message to a student with autism; such as verbal or written communication. General and special education teachers need to be trained in both of
these areas and the methods need to be implemented on a consistent basis in order to allow a student with autism to be a productive member of a general education classroom.

**Areas for Further Research**

It is important to remember that autism is a relatively new area and advancements in education and treatment are being made on a regular basis. With that in mind, additional research needs to be taken into account. A potential research study may consist of 25 general education teachers and 25 special education teachers in a particular region with a high incident rate of autism. The participants should be of different ages, gender, racial, education, and socio-economic background; however, as previously stated, they would all be teachers. These subjects would be selected randomly if possible. If this was not possible, it would be on a volunteer basis.

The methods of this study would be primarily quantitative. The special education teachers would be the control group and the general education teachers would be the treatment group. Each group would take a pre and post-test to determine content knowledge. The general education teachers would partake in a series of trainings related to autism in the general and autism in the general education classroom.

At the conclusion of these trainings a post test would be administered to both groups. The information gained would be used to determine if the general education teachers had gained any knowledge of autism in the general education setting and to what extent. It would be interesting to see if the newly trained general education teachers had more content knowledge in the area of autism than the control group of special education teachers.

The data should be analyzed in a quantitative method. A report or scholarly journal article should be prepared that compares the results. Ideally, these results would be used to drive
professional development opportunities, particularly professional development opportunities relating to working with students with autism in the general education setting.

Conclusion

Autism is a complex neurological disorder. No one person with autism functions exactly the same as another. For this reason, it is difficult to effectively educate students with autism in the general education setting. However, there are some methods that have been shown to be effective. The methods many have varying results depending upon the individual. A general education classroom tends to be rigid and this is difficult for an individual with autism to deal with. General and special education teachers alike must have the content knowledge and be willing to make the time commitment that it takes in order to effectively educate a student with autism in the general education classroom. This is no small task, but there are several professional development opportunities available with ideas that work. As long as teachers in all areas keep an open mind and are willing to work as a team there is the potential for success.
References


Appendix

This article is an attempt to determine effective educational strategies for students with autism in the general education setting. It is by no means a complete guide to determining what is effective for a student with autism. Every person with autism is a unique individual, and with that, responds to different strategies in various ways. Although there is no cure, advances in the way autism is treated are being made on a regular basis. In addition to the resources listed in the reference section of this paper, a vital source of information was the Statewide Autism Resource Trainings (START) that I participated in during the fall of 2011.