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Level of Preparation of General Education Teachers to Include Students with Autism Spectrum Disorders

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### Abstract

Since 1998 there has been a dramatic increase in children diagnosed with Autism Spectrum Disorders (ASD), resulting in an estimated prevalence of 1 in 150 children. Federal law requires schools to educate children with ASD in the least restrictive environment, increasing the number of children with ASD in regular classrooms. Teacher preparation rarely includes training in ASD, leaving many teachers unprepared to accommodate these students. Using an online survey distributed to a random sample of Connecticut teachers, this study explored formal and informal preparation of teachers as well as teachers' feelings of confidence and competence to teach children with ASD.

## Level of Preparation of General Education Teachers to Include Students with Autism Spectrum Disorders

According to the Individuals with Disabilities Education Improvement Act of 2004, an Autism Spectrum Disorder (ASD) is a developmental disability that usually manifests itself before age 3 and significantly affects a child's communication ability, social interaction, and educational performance. Additional characteristics associated with ASD include: "engagement in repetitive activities and stereotypical movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences" (34 Code of Federal Regulations § 300.8 (c) (1)). Included under the umbrella of ASD reflecting severe to mild symptoms are Childhood Disintegrative Disorder, Rhett's Disorder, Autistic Disorder, Pervasive Developmental Disorder- Not Otherwise Specified, and Asperger's Disorder (Kutscher, 2002). While symptoms and development vary among individuals, the most common characteristic of those who have ASD is a considerable impairment in social skills (Boutot, 2007; Jordan, 2003).

Over the past decade there has been a dramatic increase in the prevalence of children with ASD (Newschaffer, Falb, & Gurney, 2005; Volkmar et al., 2004). Recent federal reports by the United States Center for Disease Control and Prevention (CDC) reveal that approximately 1 in every 150 children have an ASD diagnosis (CDC, 2007). Reports by the Connecticut State Department of Education (CSDE) show that prevalence rates in the state have increased from 1.8 students per thousand in 1998 to 6.2 students per thousand in 2006 and currently average 1 in 150 students in kindergarten through grade twelve (CSDE, 2007). These data suggest that the number of individuals affected by ASD has been increasing at a rate of 10-17% per year (CDC, 2007). If this trend continues, an estimated 4 million Americans will have a diagnosis of ASD within the next ten years (Hecita, 2004).

On December 19, 2006, President Bush signed the Combating Autism Act of 2006 into law. This Act authorizes expanded activities related to autism research, prevention, and treatment through 2011. The Act focuses on the following six aims: (a) to increase public awareness of developmental milestones, (b) to promote research into the development and validation of reliable screening tools for ASD and other developmental disabilities, (c) to promote early screening of individuals at higher risk for ASD and other developmental disabilities, (d) to increase the number of individuals who are able to confirm or rule out a diagnosis of ASD and other developmental disabilities, (e) to increase the number of individuals able to provide evidence-based interventions for individuals diagnosed with ASD or other developmental disabilities, and (f) to promote the use of evidence-based interventions for individuals at higher risk for ASD and other developmental disabilities.

In signing the act, the president stated that The Combating Autism Act will, increase public awareness about this disorder and provide enhanced federal support for autism research and treatment... [T]his legislation will help more people recognize the symptoms of autism. This will lead to early identification and intervention, which is critical for children with autism. (Office of the Press Secretary, 2006)

Concurrent with the increase in the prevalence of ASD, there has been a trend toward educating children with disabilities, including children with ASD, in regular education classrooms (Yeargin-Allsopp et al., 2003). The United States Department of Education regulations implementing the Individuals with Disabilities Education Act (IDEA) of 2004 state:

To the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with

disabilities from the regular educational environment occurs only when the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (34 Code of Federal Regulations § 300.550(b))

The Least Restrictive Environment (LRE) mandate has been a key tenet of IDEA since the law was first enacted in 1975, yet some states have been slow to apply the concept. In Connecticut, a significant special education lawsuit was settled in 2002 requiring the state to increase the number of children with disabilities educated in general education classes. The lawsuit (P.J. et al. v. State of Connecticut Department of Education et al.) was brought by parents of children with intellectual disabilities against the Connecticut State Department of Education (CSDE), the State Commissioner of Education, and certain local school districts, alleging that the CSDE was denying many children the right to an education in the least restrictive environment.

The P.J. settlement agreement proposed to address this problem by increasing the percentage of students placed in general education classrooms and increasing the time that children with disabilities spent with non-disabled peers. Although the lawsuit specifically addresses children with intellectual disabilities, the CSDE issued a series of statements and memoranda during the five years that the settlement agreement was in effect, reiterating the intent of IDEA to educate *all* students in the least restrictive environment (CSDE, 2005).

As a result of the P.J. case, a number of initiatives were put into place by the CSDE to provide training and technical assistance to teachers and related service personnel to successfully include children with significant disabilities in general education classrooms. However, according to the Expert Advisory Panel (EAP) appointed to oversee the case, these initiatives did not result in significant progress in meeting the goals of the settlement agreement. In a 2007

report to the United States District Court, the EAP stated that the “lack of sufficient progress is shocking given the level of dissemination of information about P.J. and the technical assistance and professional development that has been provided” (Burrello, Coulter, Freagon, & Sailor, 2007). In spite of the state and federal laws and regulations requiring teachers to include students with significant disabilities in regular classrooms, many Connecticut teachers may be ill prepared to successfully teach this population of children.

Little is known about the status of personnel preparation for teachers of children with ASD (Scheuermann, Webber, Boutot, & Goodwin, 2003). However, recent studies have shown that providing teachers with training specific to the needs of children with ASD improves student outcomes (Browder, Trela, & Jirnez, 2007; Dib & Sturmey 2007; Jordan, 2003; Koegel, Koegel, Frea, & Green-Hopkins, 2003). Presently, Connecticut teacher preparation programs are multi-categorical and designed to meet the needs of students with mild to moderate disabilities, as opposed to serving the specific needs of students with ASD and other low incidence disabilities. Current Connecticut statistics reveal that 41% of students with ASD are included in general education classrooms for at least 80% of their day (CSDE, 2008), resulting in the likelihood that a general education teacher will be assigned at least one student with ASD during his or her teaching career.

In September 2007, The Network of Training and Technical Assistance Programs (NATTAP) held its first annual conference focused on individuals with ASD. NATTAP is affiliated with the Autism Society of America and includes a network of experts dedicated to the education of children with ASD. One of the outcomes of this conference, attended by more than 1400 participants, was a draft of National Teacher Standards for teachers of students with ASD.

The draft was made available to conference participants and is currently under review by

the Council for Exceptional Children. The document includes more than thirty competencies that teachers of students with ASD must possess under the following broad categories: a) characteristics of ASD, including etiology and criteria used to diagnose the disorder; b) assessment using evidence-based approaches, varied formats and current instruments; c) instructional planning, including access to the general education curriculum, modifications and accommodations, collecting and analyzing data to inform instruction; d) instructional strategies, including individualized and intensive instruction, applied behavioral analysis, positive behavior support, and communication strategies, and; e) transition and independence to assist students with ASD to successfully transition to adult life (Draft National Teacher Standards, 2007). These standards are consistent with current literature on personnel preparation needs of teachers of students with ASD (Callahan, Henson, & Cowan, 2008; Ingersoll & Dvortcsak, 2006; Scheuermann, Webber, Boutot, & Goodwin, 2003; Sulzer-Azaroff, Fleming, Tupa, Bass, & Hamad, C. 2008).

Embedded in this set of proposed standards is an emphasis on team collaboration. Fleming & Monda-Amaya (2001) note the following requirements for team effectiveness: shared goals and visions, clear roles, open and effective communication, support and respect, and strategic decision making strategies and monitoring. Also crucial to the team process is the inclusion of families. Effective home-school communication and collaborative relationships among school personnel must be established in order to develop an appropriate intervention or program for a child with ASD (Ingersoll & Dvortcsak, 2006; Ruble, 2002).

As the number of children labeled with ASD rises, general education teachers must be prepared to not only include these students in their classrooms, but teach them according to grade level standards. The purpose of this study was to determine the level of formal and informal

preparation of Connecticut teachers to teach children with ASD as well as teachers' feelings of confidence and competence to include this population of children in their classroom community.

## Methodology

### *Participants*

Study participants were randomly selected from a database of current teachers and administrators in Connecticut public schools provided to the researchers by the Connecticut State Department of Education in a Microsoft Access File. All positions other than general education teacher were removed from the database, resulting in a sample frame of 33,315 general education teachers from kindergarten through grade twelve. A 2% random sample was calculated using the Statistical Package for Social Sciences (SPSS), resulting in a sample of 655 teachers from kindergarten through high school.

Teachers in the random sample were dispersed among the state's 169 districts in representative percentages when compared to teachers in the sample frame based on Connecticut's District Reference Groups (DRG). DRG is a classification system used to group districts on the basis of the socioeconomic status and at-risk indicators of their student populations. These DRGs are used for the purpose of making comparisons in research studies and performance monitoring, and are based on the following seven student/family variables: family income, parental education, parental occupation, family structure, poverty status, home language and district enrollment. Each district in the state is placed in one of nine groups, ranging from the most affluent (group A) to the least affluent (group I). See Table 1 for a comparison of the DRG classifications for teachers represented in the sample frame and teachers represented in the random sample selected for this study.

Table 1.

*District Reference Groups*

District Reference Group (DRG)	Sample frame N=33,315	Random sample N=655
A	6.1%	5.8%
B	18.4%	18.9%
C	7.7%	7.7%
D	15.9%	16.3%
E	5.1%	5.4%
F	5.6%	7.6%
G	12.9%	12.8%
H	11.6%	11.1%
I	16.7%	14.0%

*Survey Development*

The survey was designed to gather information about the confidence and competence of general education teachers to include students with ASD in their classrooms. Following a review of the literature, draft survey questions were developed. The survey was piloted with a convenience sample of 10 practicing teachers and minor changes were made to survey questions as a result of feedback from pilot participants.

There were three parts to the survey. The first part included demographic questions related to grade levels taught, amount of time in current position, and total number of years in the teaching profession, as well as number of students with ASD assigned to their classroom during the current school year.

The second section of the survey asked teachers to report their experiences working with students who have ASD. Participants were asked if and when they were notified that they would have a student with ASD assigned to their classroom and if they had access to Individual Education Programs (IEPs) for those children. They were also asked about their feelings and perceptions about teaching students with ASD as well as communication with parents and team members. Two open-ended questions were included at the end of this section which asked participants first to comment on whether or not they felt their student(s) with ASD was in the most appropriate placement, and then to discuss their greatest challenges in teaching students with ASD.

The third section of the survey contained questions about respondents' specific training in ASD. Participants were asked how much training they may have had in the following areas: characteristics of ASD, instructional strategies, implementing the IEP, behavioral supports, social skills training, communication and assistive technology. Participants were asked if they felt they required additional training in order to successfully teach children with ASD and finally, how prepared they felt to teach students with ASD. The complete survey is included in Appendix A.

### *Procedure*

All information obtained for this study was recorded in such a manner that participants could not be identified directly or through identifiers linked to the subjects. The participant names and email addresses were stored in separate locations from the data.

Surveys were distributed through SurveyMonkey, a web-based interface for creating and publishing web surveys. Results were calculated by SurveyMonkey software and were available for view by the research team in real time on the SurveyMonkey website. Results were

password-protected and displayed without identifying information.

Email addresses for the selected teachers were obtained by the researchers from district websites. A cover letter with an embedded link to the survey was sent electronically via SurveyMonkey to the group of teachers in mid-April (approximately 2 months before the end of the school year). Emails returned due to incorrect email addresses were re-checked, corrected, and resent. When it was not possible to locate an accurate email for a teacher, a hard copy of the survey and cover letter was mailed to the teacher at his or her school. Two electronic reminders were sent through SurveyMonkey at approximately two and four weeks following the initial mailing of the survey to those who did not respond nor opt out of the study.

The response rate was 18.6% with a total of 122 completed surveys. Nearly half (47.1%,  $n=56$ ) of survey respondents were kindergarten and elementary teachers; 22.7% ( $n=27$ ) were middle school teachers and 31.1% ( $n=37$ ) were high school teachers. Three teachers (2.4%) declined to identify their grade level.

In order to encourage participation in the study, respondents were not asked to supply any identifying information so it was not possible to make direct comparisons between the sample group and respondent group based on District Reference Group classification. In addition, the coding system in the state database did not allow for separation of middle and high school teachers. However, data collected for elementary teachers showed that this grade level was over-represented in the respondent group, as shown in Table 2.

Table 2.

*Grade level taught*

Grade level	Sample frame	Random Sample	Respondents
Elementary	38.3%	37.4%	47.1%

Middle	--	--	22.7%
High	--	--	31.1%

More than a third of the teachers (35.5%, n=43) in the study had been in the teaching profession more than 20 years. A quarter (24.8%, n=30) had been teaching for 11-20 years, 20.7% (n=25) had been teaching 6-10 years and 19% (n=23) had been teaching less than 6 years. Fifty-nine percent of participants (n=72) had been teaching in their current position for more than 7 years, 36.1% (n=44) had been teaching a total of 1-6 years, and 4.9% (n=6) had been in their current position for less than one year.

## Results

### *Training in Autism Spectrum Disorders*

A number of participants reported having no formal training in the following areas: characteristics of ASD (35.4%), instructional strategies (33.0%), implementing the IEP (35.7%), behavioral supports (42.9%), social skills training (48.5%), communication (46.9%), and assistive technology (61.9%). See Table 3.

Table 3.

### *Amount of training received specific to teaching students with ASD*

	None	1 day or less	2-3 days	4-5 days	college course
Characteristics	35.4%	37.4%	5.1%	7.1%	15.2%
Instruction	33.0%	38.0%	3.0%	7.0%	19.0%
The IEP	35.7%	35.7%	8.2%	3.1%	17.3%
Behavior	42.9%	33.6%	5.1%	7.1%	11.2%
Social skills	48.5%	28.3%	8.1%	7.1%	8.1%

Communication	46.9%	27.5%	12.2%	4.1%	9.2%
Assistive tech.	61.9%	22.7%	3.1%	4.1%	8.2%

Some participants commented that most of their training had come from their direct experiences working with children with ASD and from what they read in books and journals. More than two-thirds (76.9%, n = 83) reported the need for more training or support to better meet the needs of their students with ASD. Within this group, the most frequently cited area in which additional training was needed was social skills, followed by behavioral supports and communication, as shown in Table 4.

Table 4.

*Additional training needs cited by respondents*

Training area	% respondents
Social skills	82.9
Behavioral supports	78.0
Communication	70.7
Assistive technology	63.4
Characteristics of ASD	52.4
Implementing the IEP	48.8

Finally, when asked how prepared participants felt to teach students with ASD, nearly a quarter (22%, n = 24) reported feeling “not at all prepared.” Nearly half (54.1%, n = 59) felt only “somewhat prepared,” 18.3% (n = 20) felt “prepared” and only 5.5% (n = 6) felt “well-prepared.”

*Experiences with Students with Autism Spectrum Disorder*

During the past school year (2007-2008), more than half of the respondents (60%, n = 72) had been assigned a child with ASD to their classroom. Of these, 29.2 % (n = 35) had been assigned one student with ASD, 20% (n = 24) had been assigned 2-3 students with ASD, and 10.8% (n = 13) had been assigned more than 3 students with ASD. Forty percent (n = 48) had not been assigned a student with ASD. Of those participants who were assigned a student with ASD, 77.6% (n = 52) were informed ahead of time of that assignment. However, 34.5% (n = 20) were not informed until the first week of school and 17.2% (n=10) were notified over the previous summer. Approximately half (46.6%, n = 27) were notified during the previous school year. Asked if they had access to the Individual Education Program (IEP) plan for their student(s) with ASD, 77.3% (n = 51) reported having full access to students' IEPs, 16.7% (n = 11) had only partial access to the student's IEP and 6.1% (n = 4) had no access to the IEP at all.

Those participants who had a child with ASD in their classroom were asked if their feelings about teaching students with ASD had changed as a result of the experience. Nearly half (45.5%, n = 30) said their feelings were more positive, 42.4% said their feelings were unchanged, 10.6% (n = 7) were unsure and one participant said his/her feelings were more negative.

When asked how often participants communicated with parents and other team members, the majority reported the following: monthly communication with parents (41.3%), daily communication with the special educator (48.5%), weekly communication with related service providers (33.3%), and no communication with administrators (54.8%). See Table 5.

Table 5.

*Average frequency of communication between teacher and team members*

	Daily	Weekly	Monthly	Never
Parents	7.9%	27.0%	41.3%	23.8%
Special Educator	48.5%	24.2%	21.2%	6.1%
Related Services	20.6%	33.3%	20.6%	25.4%
Administrator	1.6%	9.7%	33.9%	54.8%

Sixty participants (83.3 % of those who had taught a child with ASD the previous year) responded to the open-ended question asking if they felt their student with ASD was in an appropriate placement. Of these, 48 (80%) responded “yes,” 6 (10%) responded “no” and the remaining were unsure or had mixed feelings. A third (33%, n = 16) of the teachers who responded “yes” to this question indicated that they felt the placement was appropriate because the student had a mild form of ASD. Typical comments included: “this particular student is very high functioning,” or “his case is not severe, but very mild.” Three of the 6 teachers who responded that their student’s placement was inappropriate cited the severity of the student’s disability as the reason, revealing a trend toward equating the appropriateness of general education placement with the perceived severity of a student’s disability. This finding is consistent with other research on this topic (White, Scahill, Klin, Koenig & Volkmar, 2007).

Two teachers who responded that their students’ placements were inappropriate commented that they had not been trained to teach students with ASD. One teacher expressed feeling “overwhelmed ... trying to accommodate them,” and another wrote “I am not a Special Education teacher... by choice! The demands placed on regular ed. teachers these days are outrageous! We were never trained properly to teach these students, nor should we be expected to.”

Thirty-five percent of the teachers who responded that their student with ASD was

appropriately placed in their classroom wrote about the benefits to the student and the other students in the class. As one teacher stated, “it allows him the opportunity to succeed both academically and socially in the least restrictive environment.” Another commented, “He is a welcome member of the class and helps all students use strategies to help them best learn.”

Participants were asked to comment on their greatest challenges in teaching students with ASD. The majority of teachers (83.3%, n = 60) who indicated they had taught a child with ASD in the previous school year responded to this question. More than a quarter of this group (26.6%, n = 16) cited behavioral difficulties as their primary challenge. As one teacher commented, “My biggest challenge has been in learning how to get him to calm down or re-evaluate before he has an outburst that disrupts the entire class... I am typically alone in the class.” Two respondents cited “inappropriate social behavior” as their greatest challenge. A number of teachers (11.6%, n=13) wrote of a lack of time or resources to meet the individual needs of their student with ASD while also meeting the needs of other students in the class. Lack of training/technical assistance in adapting curriculum was another frequently cited challenge, with 11 teachers (18.3%) reporting that they lacked the ability or resources to modify curriculum to meet the individual needs of students with ASD.

### Discussion

This study explored the experiences and perceptions of general education teachers regarding students with ASD. Approximately half of the respondents had taught at least one student with ASD during the current school year (2007-2008). Most were notified before the beginning of the school year that they were being assigned a student with ASD; however, more than half were notified either in the previous summer or the first week of the school year. While teaching students with ASD can be challenging and many teachers lacked appropriate training,

only one of the respondents felt more negative about teaching students with ASD following the experience. Half of the respondents who had taught a child with ASD reported feeling more positive about including students with ASD in their classrooms. One teacher wrote of regret that he or she “doubted the student’s ability,” and another commented, “I really didn't consider this student to be any more challenging than the other children in the class. I had the support of a full time paraprofessional and a wonderful special ed team. So, when problems arose, there were staff to collaborate and/or address the difficulties as needed.”

Still, responses to the survey show that general education teachers in Connecticut have had little training specific to teaching students with ASD and once in the classroom, may lack the support they need to provide an appropriate education for students with ASD. Since Connecticut teacher training programs do not currently require preparation in ASD, most teachers do not have the confidence and competence to teach these learners. One quarter of the respondents felt totally unprepared to teach students with ASD, and nearly half felt only “somewhat prepared.”

The current study adds to the existing literature in several ways. First, the findings show that general educators in Connecticut are rarely trained to meet the needs of a rapidly growing population of students with ASD, even though nearly half of Connecticut students with ASD spend at least eighty percent of their day in general education classrooms. Second, results were consistent with current literature showing that teachers perceive students with milder forms of ASD as being appropriately placed in a general education classroom, while students who were viewed as having more significant disabilities were not considered to be appropriately placed in a general education classroom. Finally, and perhaps most importantly, the results of this study support the proposed standards of The Network of Training and Technical Assistance Programs (NATTAP) which recommend that teachers who work with students with ASD receive specific

training in the following areas: a) characteristics of ASD, b) instructional planning, including access to the general education curriculum, c) instructional strategies, d) individualized education plans, e) positive behavior support, e) social skills instruction, f) communication strategies and g) team collaboration.

The Combating Autism Act of 2006 calls for an increase in the number of individuals trained to provide evidence-based interventions for students diagnosed with ASD and to further the use of evidence-based interventions for students with these disorders. In order to fulfill that promise, pre-service and in-service training programs must be developed and implemented to prepare teachers to provide appropriate educational services to this population of students in the environment where many students with ASD spend the majority of their school day: the general education classroom. In addition to infusing this training into existing teacher preparation programs, graduate certificate programs which address research-based competencies in ASD, such as those recommended by the NATTAP, would allow existing teachers to develop competencies that can be immediately put to use in their classrooms. Offering these programs in summer, evening and weekend formats would allow teachers to continue to teach while expanding their skills to meet the needs of this population of students.

Technical assistance in the form of instructional coaching, with experienced educators mentoring less experienced colleagues, has proven effective in the areas of literacy, mathematics and inclusive education (Knight, 2007; West & Staub, 2003) and may provide a useful model for increasing teachers' competence and confidence as they apply newly learned skills and concepts in the classroom.

This preliminary study was limited to a small sample of teachers in Connecticut. To generalize the findings of this study, the sample size would need to be expanded. However, the

study does provide a glimpse into the current challenges faced by general education teachers who may be assigned to teach students with ASD without the appropriate training or technical assistance. Further research is needed to explore the experiences of special educators as well as related service personnel in serving students with ASD. In addition, it would seem important to explore whether general educators require individualized training programs based on their relative lack of experience with students with disabilities, or if it is effective to train general and special educators along with related service personnel and administrators so they may develop and practice the collaboration skills necessary to meet the varied needs of students with ASD.

## References

- Boutot, E. A. (2007). Fitting in: Tips for promoting acceptance and friendships for students with autism spectrum disorders in inclusive classrooms. *Intervention in School and Clinic*, 42(3), 156-161.
- Boyer, L. & Lee, C. (2001). Converting challenge to success: Supporting a new teacher of students with autism. *Journal of Special Education*, 35(3), 75-83.
- Browder, D., Trela, K., & Jirnez, B. (2007). Training teachers to follow a task analysis to engage middle school students with moderate and severe developmental disabilities in grade-appropriate literature. *Focus on Autism and Other Developmental Disabilities*, 22(4), 206-219.
- Burrello, L. C., Coulter, W. A., Freagon, S. & Sailor, W. (2007). *Expert advisory panel report to the United States District Court, District of Connecticut, P.J. et al. v. State of Connecticut, Board of Education et al. response to the State Department of Education EAP annual report*. Retrieved from [http://www.sde.ct.gov/sde/lib/sde/PDF/deps/PJ/REPORT\\_EAP\\_07.pdf](http://www.sde.ct.gov/sde/lib/sde/PDF/deps/PJ/REPORT_EAP_07.pdf)
- Callahan, K., Henson, R., & Cowan, A. (2008). Social validation of evidence-based practices in autism by parents, teachers, and administrators. *Journal of Autism and Developmental Disorders*, 38(4), 678-692.
- Centers for Disease Control and Prevention (CDC). Prevalence of autism spectrum disorders: Autism and developmental disabilities monitoring network, 14 sites, United States, 2002. *MMWR Surveillance Summaries* 2007 Feb 9; 56:12-28.
- Combating Autism Act of 2006 S. 843--109th Congress (2005). Retrieved on January 1, 2009 from GovTrack.us <http://www.govtrack.us/congress/bill.xpd?bill=s109-843>

- Connecticut State Department of Education (2005a). *Guidelines for identification and education of children and youth with autism*. Hartford, CT.: Author.
- Connecticut State Department of Education (2005b). *Fourth annual report on the P.J. et al. v. State of Connecticut, Board of Education et al, Civil Action No. 291CV00180 (RNC)*. Retrieved from [http://www.sde.ct.gov/sde/lib/sde/PDF/deps/PJ/REPORT\\_Annual\\_05.pdf](http://www.sde.ct.gov/sde/lib/sde/PDF/deps/PJ/REPORT_Annual_05.pdf)
- Connecticut State Department of Connecticut (2007). *Data report: Prevalence rate of autism for K-12 in Connecticut: 1998-2006*. Hartford, CT.: Author.
- Dib, N, & Sturmey, P. (2007). Reducing student stereotypy by improving teachers' implementation of discrete-trial teaching. *Journal of Applied Behavior Analysis, 40*,339–343.
- Draft national teacher standards: Autism spectrum disorders* (2007, September). Document presented at the first annual conference Network of Training and Technical Assistance Programs (NATTAP). Retrieved on January 3, 2009 from [http://www.autismsociety-nc.org/Draft\\_Copy\\_of\\_National\\_Teacher\\_Standards.pdf](http://www.autismsociety-nc.org/Draft_Copy_of_National_Teacher_Standards.pdf)
- Fleming, J. L., & Monda-Amaya, L. E. (2001). Process variables critical for team effectiveness: A Delphi study of wraparound team members. *Remedial and Special Education, 22* (3), 158– 171
- Hecita, F. M. (2004). *Autism: Learn and educate yourself*. KUAM News. retrieved March 3, 2008, from <http://www.kuam.com/news/9146.aspx>
- Hess, K., Morrier, M., Heflin, L., & Ivey, M. (2008, May). Autism treatment survey: Services received by children with autism spectrum disorders in public school classrooms. *Journal of Autism and Developmental Disorders, 38*(5), 961-971.
- Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. §§ 1401 *et seq*

- Ingersoll, B., & Dvortcsak, A. (2006,). Including parent training in the early childhood special education curriculum for children with autism spectrum disorders. *Topics in Early Childhood Special Education, 26*(3), 179-187.
- Jordan, R. (2003). Social play and autistic spectrum disorders: A perspective on theory, implications and educational approaches. *Autism: The International Journal of Research and Practice, 7*(4), 347-360.
- Knight, J. (2007). *Instructional coaching: A partnership approach to improving instruction*. Thousand Oaks, CA: Corwin Press.
- Koegel, L.. Robert L. Koegel, R., Frea, W. & Green-Hopkins, I. (2003). Priming as a method of coordinating educational services for students with autism. *Language, Speech, and Hearing Services in Schools, 34* (3), 228-235.
- Kutscher, M. L., (2002). *Autism spectrum disorders: Sorting it out*. Retrieved February 13, 2008 from: [http://pediatricneurology.com/martin\\_kutscher.htm](http://pediatricneurology.com/martin_kutscher.htm)
- Lerman, D. C., Vorndran, C. M., Addison, L., & Kuhn, S. C. (2004). Preparing teachers in evidence-based practices for young children with autism. *School Psychology Review, 33* (4) 510-526.
- Lerman, D., Tetreault, A., Hovanetz, A., Strobel, M., & Garro, J. (2008). Further evaluation of a brief, intensive teacher-training model. *Journal of Applied Behavior Analysis, 41*(2), 243-248.
- Newschaffer, C. J., Falb, M. D., & Gurney, J. G., (2005). National autism prevalence trends from United States special education data. *Pediatrics, 115*(3), 277-282. Retrieved from <http://pediatrics.aappublications.org/cgi/content/full/115/3/e277>
- Ruble, L. A. (2002). A parent- teacher collaborative model for students with autism. *Focus on*

- Autism and Other Developmental Disabilities*, 17, (2), 76-83.
- Safran, J. S. (2002). Supporting students with Asperger's Syndrome in general education. *TEACHING Exceptional Children*, 34 (5), 60-66.
- Scheuermann, B., Webber, J., Boutot, E. A., & Goodwin, M. (2003). Problems in personnel preparation in autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 18(3), 197-206.
- Simpson, R. (2003). Policy-related research issues and perspectives. *Focus on Autism and Other Developmental Disabilities*, 18 (3), 192-196.
- Sulzer-Azaroff, B., Fleming, R., Tupa, M., Bass, R., and Hamad, C. (2008, March). Choosing objectives for a distance learning behavioral intervention in autism curriculum. *Focus on Autism and Other Developmental Disabilities*, 23(1), 29-36.
- Tamol, S. (2007). High school graduation- and then what? *Exceptional Parent*, 37(10), 34-35.
- United States Office of the Press Secretary. (2006, December 19). President's Statement on Combating Autism Act of 2006. Press release. Retrieved from:  
<http://www.whitehouse.gov/news/releases/2006/12/20061219-1.html>
- Vacca, J. (2007). Incorporating interests and structure to improve participation of a child with autism in a standardized assessment: A case study analysis. *Focus on Autism and Other Developmental Disabilities*, 22 (1), 51-59.
- Volkmar, F. R., Lord, C., Bailey, A., Schultz, R. T., & Klin, A. (2004). Autism and pervasive developmental disorders. *Journal of Child Psychology and Psychiatry*, 45(1), 135-170.
- West, L., & Staub, F. (2003). *Content-focused coaching: Transforming mathematics lessons*. Portsmouth, ME: Heinemann.

White, S. W., Scahill, L., Klin, A., Koenig, K., & Volkmar, F. (2007). Educational placements and service use patterns of individuals with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 37 (8), 1403-1412.

Yeargin-Allsopp M, Rice C., Karapurkar T., Doernberg N., Boyle C., & Murphy C. (2003). *JAMA*, 289(1), 49-55.

## Appendix A

## Survey Questions: Preparation to Teach Students with Autism Spectrum Disorders

*Section I: Demographic Information*

1. What grade level do you teach?
  - a. Elementary school
  - b. Middle school
  - c. High school
2. How many years have you taught in your current position?
  - a. Less than a year
  - b. 1-3 years
  - c. 4-6 years
  - d. More than 7 years
3. How many years have you been a teacher?
  - a. Less than a year
  - b. 1-5 years
  - c. 6-10 years
  - d. 11-20 years
  - e. More than 20 years
4. During the past school year, how many students with Autism Spectrum Disorders (ASD) have been assigned to your classroom?
  - a. 0
  - b. 1
  - c. 2

- d. 3
- e. More than 3

*Section II: Experiences with students with Autism Spectrum Disorders*

Definition of Autism Spectrum Disorder: According to the Individuals with Disabilities Education Act (IDEA) an Autism Spectrum Disorder (ASD) is “a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age 3 that adversely affects a child’s educational performance.” Included under the umbrella of ASD are Childhood Disintegrative Disorder, Rhett’s Disorder, Autistic Disorder, Pervasive Developmental Disorder-Not Otherwise Specified and Asperger’s Disorder.

Please answer the following questions about your experiences during the current (2007-2008) school year. If you have more than one student with ASD, please select one student about whom you will answer the survey questions.

5. Were you informed ahead of time that a student with ASD would be assigned to your classroom?
  - a. No
  - b. Yes
  
6. If you answered “yes” to question 5, at what point were you informed that you would be assigned a student with ASD?
  - a. The previous school year
  - b. The summer
  - c. The first week of school
  - d. I was never informed

7. Did you have access to the Individual Education Program (IEP) plan for your student with ASD?

- a. No
- b. Yes, I had full access
- c. Yes, but I had only partial access

If you had access to only part of the IEP, please indicate which part.

8. Have your feelings about teaching students with ASD changed since having a student with ASD assigned to your classroom?

- a. No
- b. Yes, I am MORE POSITIVE about teaching students with ASD
- c. Yes, I am MORE NEGATIVE about teaching students with ASD
- d. Not sure

9. On average, how often do you communicate with the following in relation to your student with ASD?

	Daily	Weekly	Monthly	Never
Parents				
Special Educator				
Related Service Providers				
Administrator				

10. Do you feel that your student with ASD is in the most appropriate placement? Why or Why not?

11. What is your greatest challenge in teaching your students with ASD?

*Section III: Training in Autism Spectrum Disorders*

12. Please indicate what training you have received specific to teaching students with ASD.

	Length of training			
	1 day or less	2-3 days	4-5 days	College course
Characteristics of ASD				
Instructional strategies				
Implementing the IEP				
Behavioral supports				
Social skills training				
Communication				
Assistive technology				
Other (please comment on any additional training you have received in teaching students with ASD)				

13. Do you feel you need more training or support to better meet the needs of students with ASD?

- a. No
- b. Yes

14. If you answered “yes” to Question 13, please indicate areas of further training needed:

- a. Implementing the IEP
- b. Social skills training
- c. Characteristics of ASD
- d. Assistive technology

- e. Communication
  - f. Behavioral supports
  - g. Instructional strategies
  - h. Other (please specify)
15. How prepared do you feel to teach students with ASD?
- a. Not at all prepared
  - b. Somewhat prepared
  - c. Prepared
  - d. Well prepared