Current Trends in Psychological and Educational Approaches for Training and Teaching Students with Autism in California

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Abstract

Within the United States, Autism Spectrum Disorder (ASD) has seen a dramatic increase over the past twenty years. As the prevalence rate of ASD increases, an increased need for expertise in the field of education has become apparent. Psychological and educational practices for training and teaching students with ASD continue to evolve in California however, a significant gap between theory and practice remains. This article provides a historical perspective of ASD and its prevalence rates. In addition, this article examines the current shifts in teacher training and provides an overview of evidence-based strategies to support students with ASD.

Keywords: Autism, Evidence-based practices, Teacher training

Introduction

Autism Spectrum Disorder (ASD) is the fastest growing disability within the United States. In the state of California, the prevalence rate of ASD is growing at an even faster and more alarming rate (Brock, Huber, Carter, Juarez, & Warren, 2014). As the rate of ASD increases, an increased need for expertise in ASD has become critically apparent in the field of education. Psychological and educational approaches for training and teaching students with ASD in California continue to evolve; however, a significant gap between theory and practice remains. Recent trends towards inclusive classrooms have reiterated the importance for both general and special education teachers to feel comfortable and competent implementing evidence-based strategies and supports for students with ASD (Lubas, Mitchell, & De Leo, 2016). Special education teacher education training programs have shifted practices to address evidence-based strategies and supports for students with ASD; however, little progress in training and professional development have trickled down to local schools (Simpson, deBoer-Ott, Smith-Myles, 2003). A current shift in pre-service training provides targeted instruction on ASD and prepares teachers to leave their preparation programs ready to meet the unique needs of students with ASD; however,

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such teachers are often faced with a field that has not had proper training and support to implement evidence-based strategies (Lubas, et al., 2016; Mastropieri & Scruggs, 2001). This issue has caused a huge gap in the field, creating a sense of urgency for professional development in local districts. Additionally, a need for evidence-based interventions and supports are needed for teachers, parents, and students.

This article will examine the following areas: (a) a historical perspective of ASD and prevalence rates, (b), shifts in teacher training, and (c) current evidence-based strategies to support students with ASD.

Historical Perspective

Within the United States, the rate of Autism has seen a dramatic increase within the past twenty years. With the dramatic increase, legal provisions have also changed to address the needs of individuals identified with autism. The Individuals with Disabilities Education Act (IDEA) in the United States first categorized Autism in 1990 as one of its thirteen eligibility classifications for special education services. During the 1990's, in order for a student to qualify for special education services under the Federal regulations, they must exhibit comorbidity with a separate classification such as an intellectual disability (IDEA). In 2004 the law changed to define Autism as "a developmental disability affecting verbal and nonverbal communication and social interaction, generally evident before age three, and adversely affecting a child's educational performance" (IDEA 2004). With the change in Federal regulations, the number of students who qualify under the category of Autism has seen a significant rate of growth. While there is continued debate on the reasons behind the significant growth of identification, results from a recent a study conducted by Barton, Harris, Leech, Stiff, Cho, & Joel (2016), noted that across the United States, individual states differ in their procedures and criteria used to identify ASD. Consequently, individual differences in assessment procedures potentially impact each state's reported prevalence rate of ASD. Each state establishes their own ASD eligibility criteria that either meets or exceeds the Federal regulations and standards (Code of Federal Regulations, 2008).

Currently the state of California requires a psycho-educational assessment to determine eligibility for service in public schools. The law states that all children between the ages of 3-21 must have access to a free and appropriate public education, and that their disability must impede their educational performance in order to qualify for services under the law. Therefore, in California, a medical diagnosis does not necessarily qualify a student for special education services under IDEA. The multidisciplinary team can take into consideration the medical diagnosis, but according to Federal regulations they must also conduct an educational assessment to determine eligibility. A licensed school psychologist in collaboration with speech and language pathologists, special education teachers, and designated support providers (e.g., occupational therapists, adaptive physical education specialists) conduct the formal assessments to determine educational eligibility. The purpose of the psycho-educational evaluation is to understand the extent to which the suspected disability is impacting the student's educational progress. Generally, there are three steps to the evaluation process: (1) health and development history, (2) indirect assessments (e.g., structured observations, questionnaires, rating scales), and (3) direct assessments (e.g., interviews, standardized assessments, social skills assessment) (Brock, et al., 2014). Upon completion of the assessment results, the psycho-educational team determines educational eligibility for services and supports. Through the psycho-educational evaluation process, the prevalence rates of ASD have significantly shifted over the past ten years.

Prevalence Rates in California

Under IDEA, ASD is noted to be the fastest growing neurodevelopmental disorder in school age children (Barton et al., 2016). The Center for Disease Control and Prevention in the United States cites the prevalence rate for autism is currently 1 in 68 (CDC, 2014). The estimated growth of ASD has increased by 78% between 2002 to 2012 (Brock et al., 2014). In a recent study conducted by the Thompson Policy Institute (TPI), approximately 1 in 69 school age children in California are identified as having Autism, mirroring that of the prevalence rates across the United States (TPI, 2016).

In their analysis of prevalence rates across California, the Thompson Policy Institute (2016) concluded that Orange County had one of the highest rates of ASD both in the state and across the United States (1 in 50). Orange County, with approximately 3.1 million residents, is the third largest county in the state of California. The U.S. Census reported that between 2010-2014, the median income for Orange County was approximately $76,000 per year, situating itself as a moderately affluent community (Orange County, 2016). In reviewing the prevalence rates, ASD in Orange County has multiplied by eight times since 2000 (TPI, 2016). With the statistically significant increase in prevalence, it is interesting to note that the number of students with ASD under IDEA criteria has not increased at the same rate. One of the key findings of the Thompson Policy Institute (2016) was that the decreased number of students in another eligibility category could explain the dramatic increase in ASD. TPI found no significant group of students being removed from the general education classroom and being placed in special education. Rather, it appears that students who are found eligible under Autism today would have still been eligible for services earlier under a different category, such as Specific Learning Disability (SLD). TPI called this effect diagnostic migration. TPI found that diagnostic migration accounted for almost all new identified cases of ASD (TPI, 2016). From 2000-2015, children with ASD have increased by 584%, approximately 41.71% per year. Within this increase of ASD, 98.7% of the increase was from a re-designation of eligibility within special education (TPI, 2016). These statistics have caused the field to examine current instructional approaches for students with ASD, professional development, and support.

Current Educational Trends Related to ASD

As the field of ASD continues to grow, research studies continue to indicate that a significant number of students with ASD struggle academically, social emotional relationships, communicating, and exhibiting challenging behaviors (Brock, et al., 2014; Carter, et al., 2013, Sanford, Levine, & Blackorby, 2008). Approximately 40% of our students who have benefited from special education services do not receive any mental health counseling, speech therapy, life skills training, or health services related to their disability once they reach the age of 18 (TPI, 2015). Additionally, research studies suggest that many students with ASD are leaving school without the skills they need for adulthood (Shattuck et al., 2012; TPI, 2016; Wagner, Newman, Cameto, Garza, & Levine, 2005). Skills such as attending college, living independently, and maintaining a job are all areas that students with ASD struggle with post high school (Brock et al., 2016). These identified skill areas have also created an urgency within the field of education to address ways to support individuals with ASD post high school. In addition, our instructional approaches in our secondary schools need to shift.

The Common Core State Standards (2009) were developed in the United States, in an effort to standardized learning targets and proficiency levels across the states (Common Core, n.d.). Each state prior to the conception of the Common Core State Standards had its own learning standards and levels of proficiency. The evidence-based standards focus on critical thinking, problem solving, and analytical skills to ensure that every student is

college and career ready (Common Core, n.d.). The Common Core State Standards introduced rigor, depth, and complexity to our curriculum to prepare our students to be college and career ready; however, one area overlooked by the standards are ways in which we prepare our students with disabilities to be college and career ready via alternative approaches. States continue to face the challenge of creating accessible pathways for our students with disabilities to meet the standards of proficiency. For example, a collaborative approach to building transition services before exiting high school, building community partnerships, and business partnerships are all areas that continue to need examination. It is imperative for our pre-service teacher education programs to help facilitate a mechanism for continued services across systems for students with disabilities.

Trends in Teacher Training

With the rise of Autism rates, the field has also seen a significant need for an increase in ASD expertise and implementing evidence-based practices within schools (Lubas, et al., 2016). California is considered one of the most diverse states within the United States (U.S. Census Bureau). According to the California Department of Education (2015), approximately 28.3 % of school-age students identified with ASD are of Asian decent, 16.8% identified as having more than one ethnicity, 10.5% of students with ASD are of African American descent, 15.6% white, and 9.7% Hispanic. These statistics are important to note as pre-service teacher training programs in California need to address not only the increase prevalence of ASD but in addition, culturally responsive practices. Culturally responsive practices integrate individual student's cultural references in the learning process (Ladson-Billings, 1994). For students with ASD, integrating culturally responsive teaching practices is imperative because it provides a context for learning.

In 2010, California passed Assembly Bill 2160 (AB 2160) to address the growing need of students with ASD by requiring mild to moderate special education teachers to gain expertise in ASD. AB 2160 required all current practicing teachers to obtain their added authorization by successfully completing a program specifically focused on strategies and supports for students with ASD by the year 2013. In addition, California required all pre-service teacher preparation programs to revise their current programs to address the ASD mandates and regulations. To date, all special education teachers credentialed in the state of California (e.g., mild to moderate or moderate to severe) are authorized to teach any student with ASD. While the field has required all special education teachers to be authorized, a significant number of students with ASD in California are being educated in the general education classrooms and being instructed by teachers who do not have any formal training in ASD. Unfortunately, despite the recent trend, there are few models in the field that facilitate successful placement of students with ASD in general education classrooms. Teachers, service providers, parents, and others are faced with the daunting task of designing instructional programs for students with ASD without clear guidelines and protocols (Simpson, et al., 2003). Three current educational approaches for teaching students with ASD are examined below: (1) interdisciplinary collaboration, (2) progress monitoring, and (3) academic social interaction skills training.

Interdisciplinary Collaboration Model

At the crux of a successful inclusive model is shared responsibility and shared decision making among general educators, special educators, and support personnel (Simpson, et al., 2003). As students with ASD are being served in general education classes, the need for interdisciplinary collaboration is increasingly recognized. Co-teaching has gained recent attention as an evidence-based practice that increases student engagement and access to the curriculum. In co-teaching models, general and special education teachers

collaboratively plan, teach, and assess all students (Klinger, Argvelles, Hughes, & Vaughn, 2001; Mastropieri & Scruggs, 2001; Simpson, et al., 2003). Because general education teachers often view themselves as ill equipped to meet the needs of students with disabilities, and specifically students with ASD, their perception of inclusion is inadvertently effected (Nishimura, 2014). Research has correlated positive teacher attitudes as a determining factor in the success for students with ASD in general education classroom (Nishimura, 2014; Simpson et al., 2003). Teachers are more willing to include students with ASD in their classroom if appropriate supports and training are provided. Co-teaching allows for special education teachers to lend their expertise on strategies, supports, and curricular accommodations, while general education teachers provide content expertise. The combination of the two areas of expertise provides students with ASD academic, social, and behavior supports needed.

A second example of interdisciplinary collaboration is between support providers (e.g., speech and language pathologists, mental health providers, behavior therapists). Collaboration across disciplines allows for students to make effective progress towards their individual goals and objectives across settings. For example, students with ASD often have goals in the area of social skills (listening, turn taking, executive functioning, etc.). Ocampo (2011), found a significant relationship between utilizing joint sessions in speech and language and mental health and goal obtainments, specifically regarding social skills. The study indicated that effective growth is made when students are able to transfer the skills they are taught in therapy to a variety of settings. Interdisciplinary collaboration provides support for students from different professional perspectives to help master, sustain, and transfer the skills across settings.

Progress Monitoring

A second trend in teacher training is the use of progress monitoring to facilitate student access towards academic and behavioral targets. Traditionally, progress monitoring is used in the field to collect behavioral data; however, recently this strategy has been adapted to incorporate learning objectives and task analysis. Progress monitoring is an important tool to know what is working and what needs refinement. A sample format for progress monitoring for academics and behavior support is provided in figure 1. The progress monitoring form can also be utilized to monitor student goals and objectives as identified by their Individualized Education Program (IEP). For students with significant disabilities, the progress monitoring tool can be utilized to measure attempts or partial goal obtainment.

Common Core Standard:											
Learning Objective/ Lesson Goal											
	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
Task/Activity											
Learner Objective											

✓ Met   / Partially Met   ✗ Not Met

Figure 1. *Progress Monitoring Tool*

As educators, we must explicitly post lesson goals and objectives and/or learning targets to guide student learning and also to remind the instructors (e.g., teachers, paraeducators,

speech and language pathologists) of the overarching curriculum goals for the day. A posted learning target and/or lesson objective serves as a reminder of which content standards are being targeted and what mastery will look like for the intended outcomes of the lesson (Moss, Brookhart, & Long, 2011). The form shown in Figure 2 below can help teachers write clear learning objectives that can be posted for students and teachers, administrators or paraeducators (Moss et al., 2011). In addition, students with ASD benefit from having visual supports and posting learning objectives to delineate clear expectations. Collecting and posting consistent progress monitoring data using the form shown in figure 2 also ensures a seamless procedure to measure progress towards learning standards and individualized goals and objectives.

	Guiding Questions	**Frame**	**Example**
Lesson Objective	What do we want our students to do?	Students will be able to _____ _____(content) by _____ (proving behavior/product of lesson).	Students will be able to apply their understanding of questions by changing statements into who, what when, where or why questions.
Learning Objective	How will the students demonstrate their understanding?	Students must understand that _____ They will show this by_____	Students will understand that question marks come at the end of "asking "sentences and will show this in their written work.

Figure 2. *UDL Frame*

Social Skills and Social Interaction Skills

Social skills training is not a new trend in educational approaches; however, academic social interaction skills are a fairly new area introduced by the Common Core State Standards. The Common Core State Standards were adopted by California in 2010. The standards emphasize the necessity for our students to be career and college ready, to possess the skills to engage with complex texts, and to utilize evidence in writing and research. In addition, the Standards call for academic listening and speaking skills in order to work collaboratively and present ideas, and develop academic language to demonstrate the ability to perform the above skills (Bunch, Kibler, & Pimentel, 2014). These academic skills draw from the assumption that students innately possess the skills and do not require explicit instruction to master them. For students with ASD, however, these academic skills require social interaction skills that need to be explicitly taught, creating barriers to the Standards. Several studies have documented differences in the neuropsychological functioning among individuals with Autism compared to neuro-typical peers, particularly during comprehension and processing tasks (e.g., Just, Cherkassky, Kellar, & Minshew, 2004, Minshew et al, 1997), with communication between key areas of the brain being an important difference (Mostofsky et al, 2009). Hence, students with ASD require explicit instruction and strategies to access specific areas of content requiring comprehension and processing of academic language as a whole in the Common Core.

Academic social interaction skills such as perspective taking, developing an argument and using evidence to support are critical skills that the Common Core Standards require our students to develop and exhibit. Additionally, the standards require students with disabilities to appropriately turn take, collaborate with their peers, and utilize academic listening and speaking skills. Frith and Happé (2008) noted that individuals with ASD have difficulties generating and manipulating new ideas. This difficulty links directly with the new CCSS specifically in areas such as integrating new information, rules with existing concepts, and situations with multiple interpretations. These executive functioning skills require explicit instruction on the part of teachers and specialists to ensure these skills are addressed in conjunction with the new standards. Encouraging and facilitating executive function skills such as self-monitoring is both a social skill and academic demand that is required of all students. Students with ASD require additional supports in integrating these concepts across the social and academic contexts. One instructional tool that can be utilized to track data is the Observation of Academic Interaction Skills (OASIS) (see figure 3). The intended use of the OASIS is to track the number of opportunities during an academic day students with ASD are provided to practice academic interaction skills (Sugita & Ocampo, 2016). The data collected from the tool is used as a planning tool for teachers and specialists to find ways to meet individual goals and objectives as well as explicitly addressing the skills.

Time Block	Activity	Academic Language (Spoken)	Collaborative Opportunities	Turn Taking	Perspective Taking	Academic Vocabulary
Behaviors Noted: Comments:				Coding Key: TC=Teacher centered SC=Student centered WC=Whole class P=Paraeducator		

Debriefing Opportunities

Academic Social Skills	Type of Opportunities	Comments/Other Opportunities
Academic Language (Spoken)	☐ Whole class ☐ Student to peer ☐ Teacher to small groups	
Collaborative Opportunities	☐ Structured ☐ Teacher centered ☐ Student led	
Turn Taking	☐ Listening to others ☐ Take turns in speaking on topic	

Turn Taking	☐ Multiple exchanges, small group ☐ Multiple exchanges whole class	
Perspective Taking	☐ Explain own ideas ☐ Acknowledge new information from other student(s) ☐ Acknowledge new info from teacher ☐ Respond to multiple perspectives ☐ Make new connection	
Academic Vocabulary	☐ Student posed a question ☐ Student responded to ? ☐ Student contributed thought/idea	

IEP Planning Guide

Goal Area (ex: Academic Vocabulary)	Activities in Classroom (ELA: Literature)	Team Members (SLP, Gen.Ed., Sped)

Figure 3. *OASIS Protocol*

Implications for Practice

The prevalence of ASD has dramatically increased over the past ten years. To address the need of the field, pre-service teacher training programs have also had to shift in their approaches to teaching students with ASD. First, collaborative partnerships between general education and special education teachers have shifted to become a way of practice. Second, progress monitoring of instructional practices has allowed teachers and support staff to measure mastery of learning objectives. Third, in addressing the need to prepare K-12 students to become 21st century learners, recognizing that the needs of students with ASD is crucial. Targeting social interaction skills for students with ASD is imperative in providing access and mastery of the standards. Tools such as the OASIS can help facilitate collaborative learning spaces for teachers and support personnel to support all students (Sugita & Ocampo, 2016). Future research in standardizing the OASIS tool is needed. Finally, additional training and support is needed, focusing on transition services and ways to align resources across universities, local schools, and community agencies. As the prevalence rate of ASD continues to increase, it is imperative that our training and instructional practices address the growing needs of the field.

Conclusion

Current trends in educational approaches in teaching students with ASD are constantly evolving to address the needs of the field. Additional research is required in developing new evidence-based instructional practices for students with ASD. The field of education

projects a continued increase in the prevalence of ASD. As a result, specialists and support personnel need to find ways to partner across disciplines. Although public education for students with disabilities concludes at age 21, we have a responsibility to ensure that our students with disabilities have the skills needed to be self-advocates in accessing resources and supports.

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