Perspectives on Support Needs of Individuals With Autism Spectrum Disorders
Transition to College

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This article outlines some of the factors leading to challenges in succeeding in college environments for individuals with autism spectrum disorders (ASD). Individuals with the intellectual ability to pursue postsecondary education still need individualized and ongoing supports from their families and others to ensure success. Social challenges may impede integration into college, but other factors related to executive functioning and higher order planning are also critical. Suggestions for program planning, and five principles for designing programs, are provided on the basis of a review of cognitive and psychosocial factors, grounded in the extant literature, and supported by examples drawn from early evaluation of a pilot university-based program for individuals with ASD. The importance of working on higher order skills and independent problem-solving during the latter years of secondary education, prior to attempting the transition to college, is emphasized.

Key words: autism spectrum disorders, college students, executive functioning, postsecondary education, social supports, transition planning

EARLY intervention is the gold standard for best outcomes in children with developmental disabilities such as autism spectrum disorders (ASD). This is uncontroversial (National Autism Center, 2009; National Research Council, 2001); the best way to deal with complex adjustment problems is to prevent them in the first place. Strides in the diagnosis of autism have been made in recent years (Centers for Disease Control and Prevention, 2010). Yet just identifying presence of a disorder is insufficient without appropriate supports for optimal outcomes. Thus, although campaigns such as that sponsored by the Centers for Disease Control and Prevention (2010), “Learn the Signs, Act Early,” are a tremendous boon to children with ASD and their families, identifying the need for services and finding the best combination of services are two different things.

Seeking best practices beyond the early years is particularly difficult. The wide spectrum of ability in ASD itself poses a challenge. Meeting the needs of highly able individuals on the spectrum whose difficulties appear subtle requires an entirely different set of considerations than programming for more severely affected individuals. As children with high ability grow and develop, their patterns of strength and weaknesses may lead to the ability to adapt and thrive in the structured environment of primary and secondary education. The routine and structure of expectations in such environments, coupled with the supports available, may result in excellent secondary school success.

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At that point, however, a transition to a novel environment with low structure and fewer supports is on the horizon—the environment of postsecondary education. This article focuses on considerations related to intervention and supports (social and otherwise) for highly able individuals with ASD for whom college is a reasonable goal.

**SUPPORT NEEDS OF INDIVIDUALS WITH ASD**

Diagnostic criteria for ASD have evolved in recent years, and some authorities argue that a broadening of the criteria has resulted in more frequent diagnosis of individuals with subtler or milder deficits (Wing & Potter, 2002). Individuals with Asperger syndrome or high-functioning ASD need specialized services, but there is a need for more and better services if such individuals are to achieve their full potential. Recent critical reviews of the evidence base for interventions for social supports and other needs of higher functioning individuals on the spectrum show a relative dearth of intervention research (Bellini, Peters, Benner, & Hopf, 2007; Burgess & Turkstra, 2006; National Autism Center, 2009) and a lack of awareness of the scope of difficulties experienced by individuals with ASD (Winner, 2009). It is also a challenge to choose appropriate intervention strategies for a disorder so characterized by individual differences (Hewitt, 2010). Overall, there remains a need for more expertise and services targeted toward higher functioning individuals.

It is obvious that the support needs for individuals with disabilities do not end when their right to public education ends at age 21. Nonetheless the period between middle school and transition to postsecondary work or educational experiences may elapse quickly—it may be over before the extent of unmet needs for skills needed for success in the postsecondary environment is grasped.

The transition to college can be difficult for all families, even those not facing the challenges of coping with a disability such as ASD. If college is a goal for an individual with ASD, there is extreme urgency for developing independence and adaptive skill for new environments before the time for transition occurs. This need exists across all ranges of the spectrum, but individuals who are capable of college level work may ironically have the most difficulty getting the right mix of supports and opportunities for independence to enable success in the postsecondary environment.

It can pose a challenge for school intervention teams to grasp how students who are achieving high grades and excellent test scores may need services (Winner, 2009). The K-12 regulatory framework in the United States focuses on access to an appropriate public education individualized to a student’s strengths and needs. This academic focus may mean that students who are succeeding academically but not socially may receive services only if there are academic issues. Social abilities may not be seen as impediments qualifying for an individualized educational plan if they are not impacting academic success.

Social considerations, although important, are not the only major concern in considering how to prepare an individual with ASD for a postsecondary environment. The social disabilities of individuals on the autism spectrum are not isolated from broader underlying issues. In many current models of ASD (e.g., Courchesne & Pierce, 2005; Williams, Goldstein, & Minshew, 2006) social challenges are seen as arising from a broader deficit in complex information processing. That is, the social world poses challenges not because of a specific deficit in social abilities, but because social thinking requires high order, complex processing. Complex problem solving in rapidly changing and novel environments is precisely what is taxed in new college students.

**ADVOCACY AND TRANSITION PLANNING CONSIDERATIONS FOR FAMILIES AND SUPPORT TEAMS**

**Social-emotional considerations**

There are specific steps that families can take to increase the possibilities for success. Residual social-emotional concerns must be considered. If students are not offered
services in high school, or if services are not meeting the need, families may need to advocate for different or better transition services. In recent clinical experiences, I have found that parents of teenage students with ASD have diverse experiences with school interventions and individualized education plans (IEPs). Some have been offered social skills groups; others have sought out private therapy to get the right mix of services; yet others receive no assistance in high school, either because the services are not available or because the student is not motivated to participate or has a negative view of them. Advocating for the need to develop sophisticated social communication interventions may then fall to families.

**Executive functioning**

Whereas more supports may be needed in the social realm, in other realms, paradoxically, there may be a need to consider fewer supports. This seemingly contradictory suggestion arises from the problem of how to foster independence sufficient to survive in a college environment. Thus, for students receiving an array of services and accommodations, a consideration of how supports might be dismantled systematically over the latter years of high school may be necessary. Students who wish to transition to a college after high school will need opportunities to begin to develop independent problem-solving strategies and self-advocacy skills.

Addressing executive functioning deficits in a clinical setting may be helpful for some students. Attention to how these higher order decision-making abilities will be generalized to novel, real-world contexts will also be crucial. Practice in dealing with lower supported contexts (i.e., nonclinical environments) can be one strategy for decreasing the risk that an individual with ASD may not be able to cope with the complex college environment. Suggestions here might include planned opportunities for independence (e.g., doing laundry, managing schedules) and interacting in novel environments (e.g., school activities, volunteer opportunities in the community, and part-time jobs, if feasible).

**Understanding the college environment**

It is also essential for families to gain a better understanding of the college environment. The key information about day-to-day expectations cannot be achieved by reviewing brochures, college guides, and Web sites. Even college visits are not the answer to understanding what is crucial for college success, though on-site visits are highly recommended for any prospective student. Specialized information about the particular campus can be gleaned from such visits. In addition, families are wise to set up meetings with the office of disabilities services at prospective schools, where specialist staff can answer specific questions about the types of supports available at a particular campus. Understanding the college regulatory environment is crucial to making sense of the information obtained from disabilities services. The obligations of college instructional and support staff are quite different from those of K-12 staff regarding students with disabilities. To best understand whether a given college environment is suitable, frank family discussions about strengths, needs, and desires of the individual with ASD will be essential.

Reviewing the legal environment in higher education is an important step for families and transition planning teams, as it is very different from that pertaining in K-12 education. A number of resources outlining legal and practical considerations for students with Asperger syndrome and ASD have been developed in recent years (e.g., Weymann, Smith, & Schall, 2009). These three aspects of preparing for the transition to a postsecondary environment—social considerations, complex problem solving, and the college environment—are discussed in more detail below.

**SOCIAL COMMUNICATION IMPAIRMENTS**

Many children with ASD experience difficulties forming stable friendships and navigating the social world. Indeed, this trait is a hallmark of the disorder (American Psychiatric Association, 1994). In recent years,
the complexity of social knowledge has become gradually clearer. That is, it is not just a case of not having friends or being isolated socially—devastating as such problems can be. Rather, the social world is all-encompassing (Winner, 2007). Failure to process social signals and to interpret their subtleties results in a range of difficulties that are not always easy to predict or to manage when they arise. Literature on navigating the social world has proliferated in recent years, and acknowledgment that a “hidden curriculum” exists is now widespread (Crooke, Hendrix, & Rachman, 2008; Myles, Trautman & Schelvan, 2004). A young man who does not understand the social norms and expectations of dating and socializing may find himself charged with stalking or sexual harassment. A young woman who yawns repeatedly during a job interview may fail to land a summer job. A student who is unaware that his habit of licking and chewing his lips and wiping the residue on his shirt is inappropriate may be at a disadvantage in all social situations.

As students move beyond the relatively safe and supported world of high school, they face ever more challenging situations. Families and intervention/support teams may or may not recognize the extent of the difficulties. There may be a primary focus on academics or overt problem behaviors, leaving the subtler aspects of the social world largely untaught and unlearned. In fact, it is difficult for clinicians and families to be aware of the “rules” that should be taught because social conventions are both subtle and variable. Myles et al. (2004) pointed out that social expectations and rules are not the same in all situations. Swearing may be wrong in class or at a job, but may be important to signal in-group membership in casual peer social situations. The rules for eye contact are not the same in all situations; in some situations eye contact may be viewed negatively by peers, such as in the rest room or locker room. Contextual variation makes it difficult to develop a curriculum to address each and every situation, as pragmatic information of this type is heavily situation dependent and the list of situations is long.

For some of the more pressing social needs, materials exist. A humorous example is the urinal protocol video (Balikan & Childress, n.d.), where a musical introduction to rules of eye contact and other important matters is provided for using a public men’s rest room. Materials are beginning to be developed for the difficult but critical area of sexuality (a number of titles are available from Jessica Kingsley Press, e.g., Attwood, 2008). But the spectrum of individual differences is so vast, and the range of situations so broad, that a rule book cannot be written that encompasses all the different needs. A review on Amazon.com of the Myles et al. (2004) hidden curriculum book by an anonymous reviewer using the name Toucan Shan (Boo) (2006) speaks to this difficulty:

I bought this book because a reviewer said it would teach people with Asperger syndrome how to make and maintain eye contact. It does not. It just says you should make and maintain eye contact, it does not teach you how. This book only tells you what society expects of you, so if you already know what society expects of you, but just cannot figure out how to do it smoothly, do not buy this book. If you already know stuff like, “pull up your pants before coming out of the bathroom,” do not buy this book.

The situation is somewhat akin to the problem of working on vocabulary for individuals with language impairments; given that the average English-speaking high school graduate knows around 60,000 words (Bloom, 2000), teaching each individual vocabulary item is impossible. The goal rather must be to facilitate means by which vocabulary can be learned without being directly taught, or, if that is impossible due to the magnitude of learning challenges, teaching selected critical items that will be most functional for the individual. Just like vocabulary, clinicians cannot teach each and every social “skill” an individual may need. The ideal is to teach a means to acquire social knowledge; a socially oriented attitude to learning. Failing that, it may be necessary to focus on critical areas (safety, vocational and academic success, avoiding legal problems).
Winner (2007) has focused much of her clinical practice and books, training sessions, and other clinical products around the goal of increasing students’ abilities to focus on the social world spontaneously, rather than just a specific set of skills or situations. This is a “teach a person how to fish” philosophy, rather than “giving a person a fish.” That is, if individuals are taught to focus their resources on social information at all opportunities, the ability to navigate novel situations will gradually improve. Preliminary evidence for this approach is available (Crooke et al., 2008), although large scale work has yet to take place. There is good logic behind the focus on teaching what Winner calls “social thinking,” by means of counseling, visual supports, modeling, role play, and practice. If an independent problem-solving approach to social knowledge is instilled, people with ASD can resolve or prevent difficulties that otherwise would impede their access to and success in a wide range of contexts, from the classroom, to leisure time, to the job site.

**PROBLEM-SOLVING AND HIGHER ORDER PLANNING**

Issues relating to social functioning are difficult enough to address; however, the scope of the problems facing many individuals on the spectrum is much wider, affecting many domains. Executive functioning and higher order planning, including such critical skills as attention allocation and rapid decision making under changing conditions, are critical in the modern world.

For example, a specific skill needed in most regions of the United States that draws on all of the above is driving. I have worked clinically with several highly able individuals on the spectrum. Some found driver’s education pedagogy not to work for them; others learned to drive but avoided it. Many did not learn to drive at the same time as their peers; some did not learn at all. This places practical barriers in the way of educational and job access, as well as being socially stigmatizing in a culture where a driver’s license is seen as the tangible evidence of first steps to adult independence for teens.

Driving is one example of the complexity of the problems facing individuals on the spectrum; this aspect of functioning may not be considered by speech-language pathologists (SLPs), yet it may be critical to community integration and vocational success. Interdisciplinary teams (e.g., including occupational therapists) can better address such complex needs. Teams, including parents and students themselves, can discuss how to achieve successful independence in transportation. Although driving may seem far from the social world, in fact it has many implications regarding social status, independence, and stigma in the United States. Thus it has strong ties to social needs.

Because of the pervasive nature of problems facing individuals on the autism spectrum a broad view of social and pragmatic supports is critical when considering how to assist individuals most effectively. Often families are concerned by social isolation due to their son’s or daughter’s lack of ability to function in low-structured environments, which include most independent post-secondary environments. Executive function skills and higher order planning are needed to grasp the hidden curriculum and problem-solving social situations, from dorm rooms to the professor’s office. No one profession has the answers to all of these difficulties, but SLPs have much to offer to families and individuals to optimize chances of a successful transition to independent adulthood.

**PREPARING FOR THE COLLEGE ENVIRONMENT**

All college students must learn in a short span of time how to manage a range of new skills. They must plan their time with limited supervision, choose from among a range of options when many deadlines are looming, and communicate with a host of new people in new settings in a short span of time. They must also learn new strategies for studying;
many cannot break down a large task into the steps needed to complete it.

The difficulty of achieving such major change while being away from home in a novel environment is at the heart of the college transition. For individuals on the autism spectrum, success is more likely when they have a chance to develop some precursors of these abilities while in high school. As suggested above, consideration of how to create independence and familiarity with a college setting prior to arrival is a critical factor in success.

Another factor to consider as plans are made for college is emotional adjustment. These factors exist for all students, not just those with ASD. Homesickness and difficulty managing on one’s own are seen as hallmarks of many young people of the current generation, allegedly to a greater degree than in years past. Hurtado et al. (2007) reported that 48.7% of first year college students stated that they “frequently or occasionally felt lonely or homesick,” and 39% reported that they frequently “felt overwhelmed by all they had to do.” Reasons today’s students might have more difficulty adjusting to college life than in former times are many, including larger and more comfortable homes with fewer family members in them than in their parents’ and grandparents’ time. Sharing a college dorm room with one other person may in the past have been a step up, or at least not that different from sharing with siblings. Houses built prior to the 1960s in the United States often had just one bathroom and were marketed to families with multiple children. Now many students leave behind comfortable and private space to navigate sharing for the first time in their lives.

In addition, the ease of constant connection with communication technologies such as cell phones, texting, and computer social networking makes developing independence less necessary. The current generation is alleged to suffer from “helicopter parenting,” in which parents continue to hover, providing caregiving and trying to solve their children’s problems, long past the age when it is needed and appropriate. Research on college adjustment suggests that parental caring is good, but overprotection is a risk factor for failing to make a successful adjustment (Klein & Pierce, 2009).

Certainly many challenges beset the current generation of college students; a recent article in the *Chronicle of Higher Education* reported that one-third of current college students reported making use of counseling services at their institutions (Sieben, 2011). Thus, even without the complicating factors of disability, transition to college has many obstacles. For students with ASD, obstacles to college success may prove too much to surmount without careful preparation and ongoing support. One decision that must be made is whether a shared dorm room is the right situation for a student with ASD. One argument in favor is that having a roommate may assist in having a more normal college experience. Yet a single room may be a reasonable accommodation to which a student with ASD is entitled. An argument in favor of obtaining this accommodation is that, if a student has a single room, this space can be important in maintaining his or her own routine without having to cope with the stresses of another individual’s wants, needs, and habits.

Much has been written about the hidden curriculum of secondary schools, but postsecondary education has its own hidden curriculum. The unique challenges of individuals on the autism spectrum impede their ability to navigate their way through the learning process that the transition to college requires. Individuals with significant executive functioning deficits may find that they have problem-solving skills that are insufficiently broad to master the many complex elements of college life.

Resources are beginning to be developed that target the unique needs of adolescents and young adults with ASD, but research is scarce. Available resources provide a good starting point, but little concrete guidance for working with individual differences. Wehman, Smith, and Schall (2009) provided an excellent overview of the many areas that need attention for students transitioning to postsecondary environments, and such
resources can help frame conversations on planning teams. Concrete next steps may be left to the resources of individual clinicians and teams.

DEVELOPING SPECIFIC SUPPORT PLANS

In locating appropriate educational settings for students, parents often seek out places known to offer specific supports for students with disabilities. For ASD, there are nationally recognized model programs, such as those at Marshall University in West Virginia, where an array of services are provided in a university-sponsored program that charges extra tuition for participants. A list of such programs is available at http://collegeautismspectrum.com/collegeprograms.html (Higher Education and Autism Spectrum Disorders, Inc., 2011). Unfortunately, the number of such programs is still relatively small, and programs may not be available in all geographic regions.

To understand why a special program may be a critical factor in success, it is important to understand that the range of reasonable accommodations legally required may be more limited than is needed for student success. Common accommodations include extended time on tests and assignments, note takers, individual testing environments, and priority scheduling (Wehman et al., 2009).

Universities are required by law in the United States to provide these types of basic accommodations. The Americans with Disabilities Act (ADA), Title II “requires that state and local governments give people with disabilities an equal opportunity to benefit from all of their programs, services, and activities” (U.S. Department of Justice, 2005). In practice, this requirement means that, unlike K-12 education law, the standard is not to provide an education that ensures individual success, but rather to remove barriers preventing an individual from accessing an education. The education itself is not modified in any way. Gordon and Keiser (2000) provided a helpful set of principles to clarify that the ADA law is a civil rights law focused only on equal access, whereas the Individuals with Disabilities Education Act (IDEA) seeks to assist students to meet their maximum competence, whatever that may be.

Students with a disability who are seeking accommodations must first contact the office of disabilities services on their campus. As stipulated by law (Gordon & Keiser, 2000; U.S. Department of Justice, 2005), they need to provide documentation of a disability, and then the office determines what types of accommodations might be reasonable to guarantee equal access. As a cost-saving measure, some institutions may e-mail letters of accommodation to students. Note that students who do not access their e-mail would never be able to make use of accommodations; they might have been made aware of their rights in a meeting, but they are required to follow through on their own by locating the e-mailed document and sharing it with each individual professor. Issues with social skills and/or initiative and planning may preclude students with ASD from showing the letter to professors, as is required by law. Professors are not allowed to make individual determinations of who does and who does not deserve an accommodation under ADA.

The requirements of securing an accommodation may put a student who never before had to advocate for him or herself into an unfamiliar situation as a self-advocate. Thus, students may be stymied from the very beginning of the educational experience because the essential skills needed to access accommodations are lacking. Parents may request legal access to their child’s records if the student is willing to waive rights guaranteed by the Family Education Rights and Privacy Act. Otherwise, instructors cannot give out information about a student to a parent. Obtaining such rights does not guarantee that the parent can assist with classroom or course challenges. There are limits to what a third party is practically able to achieve. For example, if parents have been granted rights to communicate with professors, they may be well informed of what their student needs to do, but if the student does not or cannot follow through, the parents’ knowledge may not make a difference in the outcome.
Even students with ASD who succeed in using their accommodations may need much more than the legal minimum. The director of disability services at one university referred to the additional supports needed by students with complex needs, such as students with ASD, as “extra cheese on the pizza.” Unfortunately for the students, although what they need may be seen as extra under the law, it is far from extra for them. Thus the need for programs specifically designed for students with ASD is critical.

At Bowling Green State University, we are beginning to develop such a program. It integrates extra supports from our Speech and Hearing Clinic, the Department of Intervention Services, and the Office of Disabilities. This project is only in its infancy, and one goal is to determine if small steps, such as those initially available to us, are sufficient. The current atmosphere of budget cuts and shrinking resources makes us consider carefully how far we can go with modest ambitions and even more modest resources. Key aspects already have made themselves clear, as the program has finished its first year. Our initial evaluation led to identification of five principles, which are discussed in the sections below.

1. Getting student buy-in is key

If the student does not believe that he or she will benefit from services, those services will not be accessed. Thus, counseling at the beginning and ongoing is a major part of a successful ASD support program. Two case examples illustrate the differences when the student is and is not a full and willing partner in making change:

Case Example 1. William* was entering his sophomore year and was successful in his college career so far in terms of grades. Nonetheless, his parents were concerned about his lack of integration into college, and the fact that he has several unusual behaviors accompanied by little awareness of or interest in the impact he makes on others. William lived at home while attending college and denied an interest in college activities beyond his class work. He also reported a negative experience with speech-language intervention during middle and early high school, which he perceived as too “babyish.”

During a meeting with his parents, the clinician noted several unusual nonverbal and verbal behaviors, so she questioned William about them, asking, “If today were a job interview for a position you really wanted, how do you think it would have gone for you? Would you get the job?” The student answered immediately: “It would be a disaster.” Seizing on this insightful response and seeing it as an opportunity to increase William’s interest in pursuing support services, the clinician discussed the potential negative impact on his ambitions and goals of failing to develop in nonacademic areas. She pointed out specific goals that intervention would help him to target. In this case, the outcome was an unusually high level of “buy-in,” such that he attended weekly sessions for the entire academic year, making strides in several areas. Two key elements were the clinician’s willingness to tackle an uncomfortable subject directly with the student and the acknowledgment that young adults make their own choices; so for William, getting sufficient awareness of the potential benefit to him relative to his goal was crucial.

Case Example 2. Ethan was a freshman with a diagnosis of Asperger syndrome and attention deficit disorder, who came to college with a history of supports and therapy during his entire primary and secondary school career. The outcome of this support was exceptionally good in the social realm. Interpersonally, he was engaging and not obviously socially impaired. Ethan had made friends successfully in his dorm and also participated in activities sponsored by two different special interest groups. Thus, he was making excellent progress in transitioning to a group environment.

He was less successful in his academic progress, however, needing maximum support to complete assignments and even to know what he was expected to do. He lacked

*All names are pseudonyms; details have been altered to protect confidentiality.
problem-solving abilities to use web-based and e-mailed information to track assignments and develop knowledge of course expectations. His mother had been attempting to fill the gap, long distance, using e-mail and phone contact, but this was intermittently effective because Ethan rarely read his e-mail.

A system of supports was set up to assist in organizational and executive functioning development, consisting of twice weekly meetings with a graduate student in speech-language pathology. After an academic year with prompts, models, reminders, and one-on-one practice of perspective-taking, using a planner, and breaking down assignments into manageable steps with reasonable timelines, limited progress was noted. The student had difficulty taking responsibility for failures to turn in assignments or study adequately for exams, and showed limited insight into reasons for poor academic outcomes. A huge difficulty was his impairment in the ability to focus sustained attention on a task. Ethan reported extreme difficulty focusing. He had poor insight into his actual class performance (e.g., was failing a class in which he thought he was doing well), and was at risk of not continuing. Reasons for lack of progress were seen by his clinician as primarily related to the executive functioning and planning deficits, and his difficulty achieving awareness of consequences of his decisions.

The differences between William and Ethan illustrate the challenges of working with the complex needs of individuals transitioning to the college environment. Like William, individuals with Asperger syndrome may present with classic social problems, offset only partly by their strong academics. With strong motivation and commitment to working on change, they can make inroads on these challenges. Others, like Ethan, may have benefited from social skills training and other supports such that they have mastered many aspects of navigating the social world, but still lack insight into the need for personal change. Most importantly, they may lack the ability to set goals and standards and solve problems without external motivators, especially given the limited supports available in a postsecondary environment.

Sustained focused attention is neurologically difficult for many in this population; this means that to engage in activities requiring such effort a high level of commitment is critical. One may speculate that the overwhelming special interests of many individuals on the autism spectrum may be a response to the need to put extraordinary effort into focusing attention. Unfortunately, there are no easy answers to the subtleties of personal responsibility and internal motivation. A person-centered approach (Michaels & Ferrara, 2005) is key to understanding what is central for the student; the transition from student to young adult is a complex process, but the fact is that postsecondary environments treat students as independent adults, and parents must seek and obtain special consent from their children to take part in the process.

Many students are willing to provide consent for parent access to their records, but even when they do, parent input may be limited, even for students living at home. Parents can attempt to meet with administrators and professors, but much is still left to the student for problem solving in terms of day-to-day independent management. Thus the process is heavily student-centric, as it should be, but developmental lags and executive function deficits can impede students’ ability to work independently on the things that are posing problems.

2. Social skills and social thinking are only one part of the picture

William’s case illustrates that exclusive emphasis on the social aspects of ASD may draw needed attention away from the most significant current adaptive challenges. The good news is that efforts during primary and secondary years to increase social awareness and social language may be successful. Clearly many students with ASD need to address their social perspective-taking abilities for the postsecondary environment. The neurological problems that are at the foundation of ASD, however, are not always manifested
primarily in social problems. Minshew and Williams (2007) described ASD as a disorder of complex information processing. Certainly the social world requires complex processing, but many other things do as well. Success or failure at college classes may depend on higher order problem solving and executive functioning, organizational skills, and ability to follow through on planned actions. If clinicians work to support students on the autism spectrum solely in the social realm, they may miss the most needed areas for certain students.

3. Comorbid factors must be considered

Students with ASD have high comorbidity of psychiatric diagnoses, including mood disorders such as depression and phobic disorders such as social anxiety, as well as attention deficit disorder and many others (Leyfer et al., 2006). Many of these are outside the scope of practice of speech-language pathology, so access to an interdisciplinary team that can help address these aspects is crucial, as illustrated in the following case example:

Case example 3. Caleb was referred to our university’s program by his mother, who was concerned about her son’s repeated difficulties in passing English. Although Caleb was maintaining barely adequate grades in other realms, he experienced significant difficulty with any task involving writing. This impacted not just the required freshman writing class, which as a junior he had yet to pass, but also other general education requirements requiring writing. Upon meeting Caleb, his low affect and difficulty expressing himself were immediately apparent. He had one highly positive factor—he sought help independently from our program several times. Unfortunately, he was highly inconsistent in attendance at his clinic appointments. Moreover, his expressions of extreme sadness and lack of ability to focus were so alarming at a first meeting that the clinician asked him to go straight to the campus counseling center as soon as he left her office. He complied and received ongoing supports there, which helped to some extent, but severe and ongoing depression limited Caleb’s ability to deal with setbacks in his courses requiring academic writing.

Caleb exhibited the same profile as the majority of the individuals we worked with, including difficulty breaking down a task to identify steps to complete it, independently identifying the resources needed and locating them, and general impairment in problem-solving skills. These issues were exacerbated by Caleb’s mood disorder, one consequence of which was difficulty getting started on a task. Thus, although he was motivated and had sufficient self-efficacy to seek help from us independently, his depression posed a barrier that was not possible for the SLPs to deal with alone. Students such as Caleb need a team of professionals with a high level of expertise, and these are not always available in the postsecondary environment. Although nearly every campus today has a counseling center, these centers may not always have personnel with the needed specific relevant expertise in ASD. Fragmentation of services may be another factor affecting treatment; dedicated programs for ASD seek to prevent such fragmentation by coordinating all services.

4. Intermittent supports are insufficient

Although this may appear to be common sense, the fact is that a postsecondary environment has many options for any open time. Students, even when they intend to follow through with appointments, may not end up doing so. A host of issues arise, from clinician scheduling, to group projects, to special events, to professor office-hour conflicts. The hope is that, as students with ASD develop independence and confidence in decision making, they will make the best decisions about how to use their open times. In the beginning of a new program, consistent attendance is critical: to develop rapport with the clinician; to begin to build a foundation of skills; and to develop the self-awareness and insights needed to grasp where change is needed to meet the student’s goals. As with younger populations, evidence is increasing for consistent, relatively intensive support as a key factor to making change; this is consistent with
the best current understanding of the neurobiology of ASD (Williams et al., 2006).

The consistency factor relates to the first observation in this list about the need for internal motivation for change. In our program, we have discovered that simple factors, such as access to a cell phone with text capabilities or being in the habit of reading e-mail or listening to voice mails, may need to be taught as prerequisite skills. Early solutions to logistical problems can be prerequisite to other progress. Clinicians need ways to contact students, and because they are individuals with severe challenges in organization, just finding a way to consistently contact them can prove daunting. For those students who are coming to the Speech and Hearing Clinic, Health Insurance Portability and Accountability Act (HIPAA) guidelines apply, and under this law, clinics can telephone individuals but cannot leave a message without written permission; similarly, clinics cannot use e-mail to remind students of appointments. These restrictions may lead to a “Catch-22” situation, in which the very reason students need services impedes them from accessing them.

5. Effective change necessitates directness

Individuals on the autism spectrum are inefficient processors of information. Auditory information is transitory; hence, much intervention for younger and more severely challenged populations relies on visual supports. The primary reason for this is that visual information persists through time, allowing for the recipient to have more time to grasp its significance. Evidence is accumulating that the sensory processing impairments of ASD relate to their difficulty with efficient processing of information (Williams et al., 2006). Thus for information that is not easily pictured—and for individuals whose capabilities are well beyond the picture schedule and social story realm—short, clear units of information will assist them. Short direct sentences that address specifics are best suited to the challenges of complex information processing. This dictum extends to uncomfortable topics, especially ones that are central to the most pressing areas of need.

For example, a student recently asserted that eye contact was not common on the East coast where he grew up. In response to such assertions, a polite way to handle it would be to allow the student, as a native Easterner, to have the authority and defer to his experience. In order for him to better grasp why lack of eye contact could hamper him professionally and personally, less politeness and more directness is called for. A clear statement that his belief is false is needed. Fortunately, unlike younger or less able individuals, college students with ASD generally have the logical ability to grasp information when it is presented in a sufficiently clear manner. In our clinical experience, students are rarely offended by a direct approach when it is presented calmly, with a logical reason why the information presented is important, or why the change we are requesting would benefit them. Clearly there is a risk that a negative reaction may result when a clinician directly challenges a belief or draws attention to an uncomfortable subject, but dispassionate presentation of information can be an effective means to communicate with individuals whose strengths include logical and rule-based thinking.

FINAL THOUGHTS ON COLLEGE FOR INDIVIDUALS WITH ASD

Autism spectrum disorders result in many types of challenges; however, the fact remains that individuals with ASD may be sufficiently gifted to be able to complete a college degree. The profile that allows a person with ASD to succeed academically in a structured environment may nonetheless be the reason for failure in environments with fewer supports. Memorization of facts and other concrete learning strategies can result in strong high school performance, but will not take a student through four years of college.

As with all clinical populations, best practice is to consider carefully the mix of strengths and needs that present themselves,
to develop an effective program to assist a student to develop the abilities that are lacking. Particular care is needed when considering what is expected of students who have exhibited strong intellectual potential. For example, a young woman who had attained both a bachelor’s and a postgraduate degree discussed during an interview what she saw as the negative ramifications of the social pressure to pursue education and a career at the highest levels, commensurate with her considerable intellect. She referred to herself as underemployed, not being able to get a position in the field for which she had trained. She was not diagnosed with Asperger syndrome until she started college, and she related how the expectations that were placed on her for success may have led her to make choices that were not the best for her. At the time she was interviewed, she was not independent in her living situation, and she was not able to successfully navigate the world of work without assistance, due to her social impairments. Possessing an advanced degree and a credential coveted by many had not led to success in the field that she had trained for. Her path may or may not have been the right one for her; she had accomplished much in her academic career. Yet if there had been services available targeted at her specific deficits in earlier years, she may have built a repertoire of abilities that would have provided the necessary “hidden curriculum” for the social needs of her chosen profession.

For any student, the many choices in post-secondary options can prove daunting to navigate. The right program will allow for the student’s optimal development. In a world where a college degree is seen as the best means to a secure income, it would not be appropriate to scale down expectations of individuals on the autism spectrum capable of completing college. Reflecting carefully on the best fit between a student’s wants, needs, talents, and support requirements may, however, mean that the elite 4-year liberal arts school far from home may be a poor choice, even if a student has an acceptance letter in his or her hand. Looking at options that allow a student time to develop capabilities, such as part-time or 2-year approaches, may allow for a student to grow at an individually appropriate pace of development. Neurological evidence shows that development of the frontal lobe region extends into the early twenties (Minshew & Williams, 2007). Therefore a biological argument exists for considering whether waiting for more challenging experiences, such as living away from home, may result in better outcomes.

The profession of speech-language pathology has a tendency to expand its scope of practice, and this can pose challenges. It may prove difficult to draw a line between a social communication intervention and broader needs and goals in cognitive and social-emotional realms. Working with individuals on the autism spectrum poses a challenge to provide evidence-based, yet individualized, services. As more supports are available for this expanding population, more opportunities for research arise.

As Winner (2009) pointed out, the provision of services for older students who are headed to college needs to move toward planning for success and independence. Ironically, having too much support in high school may actually lead to an inability to cope independently in college. Allowing for attempts that may lead to failure might involve a slow removal of supports in the latter part of high school, in preparation for a less abrupt transition to college. The good news is that positive outcomes are possible with the right mix of services, at the right time. Research into intervention for the needs of adults on the spectrum is still far behind work on early and middle childhood (National Autism Center, 2009); as the evidence base grows, clinicians can aspire to provide ever more effective services.

REFERENCES


