Implementing a Communication Coaching Program for Students with Autism Spectrum Disorders in Postsecondary Education

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This article describes the operation of a Communication Coaching Program, which was designed to provide supports for students with autism spectrum disorders (ASDs) attending the University of Rhode Island. To succeed in college programs, many students with ASDs need access to specialized programming and personnel who are able to foster their success in both social and academic venues. The Communication Coaching Program has utilized the principles of individualization, evolution, and relevance over the 5 years of its existence. Disability counselors, along with communication coaches and peer coaches, provide students with ASDs opportunities to receive the explicit teaching and guided practice of social-communication and executive functioning skill sets that are keys to successful retention and graduation from postsecondary education. Insights gleaned from 5 years of programming are discussed. Key words: autism spectrum disorders, coaching, disability services, executive functioning, individualized programming, postsecondary education, social-communication skills

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Autism Spectrum Disorders (ASDs) are neurodevelopmental disorders characterized by deficits in social communication, repetitive behaviors, and by limited interests and activities. Many articles have been published regarding the early stages of development for children with ASDs, but less is written about transition into adulthood. Several questions about how autism is expressed in postsecondary education settings and beyond are addressed in this article, and approaches are described for supporting students with ASDs in postsecondary education contexts. Key questions include the following: Are students with ASDs able to succeed in postsecondary education? Do they typically have the necessary academic and social competencies to complete an undergraduate degree and perhaps a graduate-level degree successfully? Is employment likely, with or without postsecondary education?
Given the wide range of abilities found across the ASD population, not every student with ASD will decide to attend college (just as not every student in the general population chooses college) nor will every individual with ASD find employment easily. However, for students with ASDs who do choose the path of postsecondary education, the answers to questions about preparation and the likelihood of success are often high in the minds of a prospective student’s family, college administrators anxious to create a level playing field for all students, and the students themselves. Unfortunately, the data reported from several groups of investigators are less than encouraging.

On a national level, available data concerning the postsecondary success of students with ASDs are compelling and concerning. Shattuck and colleagues (2012) reported survey data collected from the parents or guardians of students with ASDs as well as from the students themselves. Their findings indicated that by 6 years after high school, just over one-third of these individuals had continued their education (34.7%) and just more than one-half of them had been employed (55.1%). However, when life at the high school plus 2-year point was considered, half of the participants had not pursued either further education or employment. Interestingly, Shattuck et al. compared their findings from students with ASDs with outcomes gleaned from students with 3 other diagnoses: specific language impairment, mental retardation, and learning disabilities. Students with ASDs were least likely to be employed and most likely not to be participating in either post-high school education or employment. Not surprisingly was the authors’ finding that students with ASDs who were reported to have higher functional skills were the ones most likely to have participated in either employment or postsecondary education. Those families reporting higher incomes also were more likely to have children who were successful in the educational or vocational arenas.

Taylor and Seltzer (2011) also reported what they referred to as a persistent “pattern of underemployment” (p. 572) for the young adults with ASDs they followed. Although the authors noted that almost half of the young adults without intellectual deficits were enrolled in postsecondary education, outcomes for this group in terms of proportion of degrees earned or subsequent employment achieved were not available. More recently, Taylor and Mailick (2014) published a 10-year longitudinal analysis of both employment and education status for a group of more than 150 adults with ASDs who ranged from ages 18 to 52 years at the start of data collection. Unlike the upward employment mobility typical in the non-ASD population, Taylor and Mailick (2014) reported only rare instances of improvement over the 10-year span in either vocational or educational endeavors for their group of adults with ASDs. The authors attempted to explain their outcomes as follows: if students exhibited difficulties related to ASD at the time they left high school, they were likely to continue to exhibit those difficulties. In fact, the negative impact of their deficient skill sets might grow worse with time. Furthermore, Taylor and Mailick suggested that a student who starts with deficits in competencies related to independent daily living after high school may have fewer vocational choices to begin with and may continue to lose ground as time passes. The authors concluded that, if underemployed, adults with ASDs are at risk of losing some of the independent daily living skills they once had acquired, perhaps because of lack of stimulation in their work environment. This conclusion fits well with a finding reported earlier by Taylor, Smith, and Mailick (2014) that when provided with vocational opportunities incorporating challenges, persons with ASDs were more likely to exhibit diminished maladaptive behaviors and to improve their independent skill sets. That is, when forced to stretch their skills to capacity and beyond, individuals with ASDs made gains in areas not directly targeted in their vocational setting. This finding emphasizes the importance of students with ASDs completing their high school experience with a solid repertoire of independent living skills.
as critical to fostering future gains and then engaging in appropriately challenging experiences as young adults.

Current evidence regarding whether this is occurring, however, is somewhat discouraging. Survey data reported by Gotham et al. (2015) for the 255 of their adult participants with ASDs who were able to self-report demonstrated additional evidence of underemployment. Gotham et al. (2015) also noted higher than expected rates of comorbid disorders (e.g., physical health comorbidities, mental/behavioral comorbidities) in this group. Specifically, 88% of those self-reporting indicated two or more physical comorbidities (e.g., sleep problems, allergies, gastrointestinal issues) and 57% indicated two or more mental/behavioral health comorbidities (e.g., anxiety, depression, attention-deficit hyperactivity disorder). Those respondents described as “high functioning” and diagnosed with ASDs later in life were more likely to report that they were employed, had earned postsecondary degrees, and were living independently; however, even this subgroup was rarely employed full-time. According to the investigators, the intrusion of their comorbid conditions as well as the reported presence of workplace discrimination made employment too much of a challenge for some. This points to the importance of keeping challenges within manageable limits, along with preparation to handle the challenges.

Taken together, these findings paint less than a positive picture of the future for individuals with ASDs to pursue postsecondary education, in particular when they have the intellectual ability co-occurring with their ASDs. Regardless, the subpopulation of college students with ASDs is growing significantly as evidenced by the data from our own institution, the University of Rhode Island (hereafter, URI) as well as across the United States (Centers for Disease Control and Prevention, 2012).

Others have written about the difficulty of gaining accurate estimates of the numbers of students with ASDs on college campuses. For example, White, Ollendick, and Bray (2011) investigated the prevalence of students with what they defined as high functioning autism spectrum disorders (HFASDs) on their campus at Virginia Polytechnic Institute. According to these authors, the appreciable variability in reports of the prevalence of students with ASDs across college campuses can be attributed to differences in definition of HFASDs, as well as the unwillingness of students older than 18 years to self-report. Thus, in a study approved by the university’s research review board, White et al. (2011) chose instead to collect their own data gleaned from a sample of more than 650 undergraduate students rather than rely on self-reporting. Participants were told that they were completing questionnaires to determine student health needs and that they could earn college credit as well as a small honorarium for their participation. Depending on the combination of measures used, their prevalence statistics for ASDs ranged from 0.7% to 1.9% of students. Translated to proportions, these data represented 1:53 to 1:130 students; these ratios were similar to the prevalence data reported for 8-year-olds diagnosed with ASDs in the United States. Not all of the students identified with HFASDs by the investigators had been identified prior to the assessment by White et al., that is, before the students’ college enrollment. Thus, many of the newly identified individuals had not received special supports leading up to college. The investigators’ results also demonstrated that students who scored highly on measures indicative of HFASDs also scored highly on ratings of anxiety, aggression, and depression. White et al. (2011) further noted, “Social anxiety may be an unfortunate but understandable result of having HFASD” (p. 697). Rather than an unusual happenstance, White and colleagues (2011) provided evidence that the presence of uncontrolled anxiety may be more of the rule than the exception in this subpopulation of college students. Widespread manifestation of anxiety was also evident in the findings of Gotham et al. (2015).

Shattuck et al. (2012) concluded that better transition planning from high school
to college was needed to foster a higher proportion of participation in postsecondary employment or education for individuals with an ASD diagnosis. Of the many differences that may describe individual students is the degree to which they have been prepared for the college environment prior to arrival on campus. Transition planning must be part of the Individualized Education Program development process once a student is 16 years of age, as mandated by the Individuals with Disabilities Education Act (Milner & Bates, 1997). Taylor and Henninger (2015) investigated the support programming received by students with ASDs in their final year of high school and found that as a group these students were “underserved” (p. 179) in terms of recommended and needed support services. These services included, but were not limited to, speech-language therapy, mental health services, and vocational or jobs skills training that could help prepare them for transitions to adulthood. Thus, just at the time when special supports should be in place to help students with ASDs prepare for a paradigm shift to postsecondary education or employment, they were often absent.

As noted by Hewitt (2011), the supports essential to the success of students with ASDs in college should not be relegated to improvement of social communication competencies only, but should also include attention to the executive function competencies essential to a successful postsecondary academic life. These incorporate many skills, including the ability to organize one’s academic life by prioritizing tasks, making predictions about the time needed to complete assignments, and analyzing how to navigate the academic environment.

At the URI, data gleaned from the last 8 years indicate that the number and proportion of students with a diagnosis of ASDs have increased at our institution. In 2014, the URI’s Disability Services for Students (DSS) office reported that there were 48 students enrolled with ASD diagnoses (representing 3.7% of the students diagnosed with disabilities and approximately 0.04% of the total student population of the URI) as compared with 24 students reporting this diagnosis in 2008 (or 2.4% of all students identified with disabilities). On a campus of more than 13,000 students, this number may appear negligible, but given the number and type of supports needed for many of these students to be retained in a degree program, a doubling of this population represents a considerable increase in the complexities of providing appropriate student support. As suggested by White et al. (2011), it is likely that there is a considerably larger number of students on campus who would meet the criteria for ASD than may be self-reported to the office of DSS. These additional students may make themselves known to the DSS once the initial challenges of managing college life are addressed. Furthermore, findings from several groups of investigators have made it clear that concomitant issues, most notably anxiety, may need to be addressed among these students (Gotham et al., 2015; White, Kreiser, Pugliese, & Scarpa, 2012).

The purpose of this article was to describe the components of a multifaceted, university-based program of supports that has evolved over the last 6 years to maximize retention of students with ASDs through to graduation and to foster skills that will increase the likelihood of their employment. This description of our experiences with the Communication Coaching Program (CCP), developed at the URI (Rohland & Weiss, 2013; Weiss, Hewitt, Rohland, & Murray, 2012; Weiss & Rohland, 2014) will present it as an option for meeting the needs of postsecondary students with ASDs.

THE COMMUNICATION COACHING PROGRAM

Five key components

The CCP represents a systematic collaboration between the URI’s DSS office and the Department of Communicative Disorders. It has been operational for the 5 years between 2010 and 2015. The 5 current components to the program include disability counseling,
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communication coaching, peer coaching, social groups, and campus resources.

Disability counselors

When students with ASDs make themselves known to the DSS, they are assigned to a disability counselor who provides students with a recommendation to participate in the CCP when appropriate. In addition, a disability counselor meets with students with ASDs on a regular basis. This may be once per week, or it may be less frequently if the student has adapted well to college life. The focus of these meetings includes, but is not limited to, discussing course selection and schedule realignment, the selection of a major, strategies for planning a productive work week, and determining how the student can resolve conflicts with a roommate or suitemate. In addition, the disability counselor generally manages referrals to other university resources, as discussed later.

Many students who present to a college-level disability services office have a history of multiple, or comorbid, diagnoses. Most commonly, these additional diagnoses are for anxiety disorder, depression, attention-deficit hyperactivity disorder, and language-learning disabilities. This is particularly true of students with ASDs, which makes the relationship between the disability counselor and the student even more critical. The disability counselor is the person who can help a student navigate and locate the many and varied supports, all interrelated, that are available on most college campuses. Although these supports are generally available for all students, a student with ASD will appreciate the guidance of his or her disability counselor to assist the student to locate services or run interference for the myriad of social interactions necessary to navigate a complex college experience.

For example, the mission of the DSS at the URI is to work “with students and all units of URI to foster an inclusive, welcoming, and accessible environment” (http://web.uri.edu/disability/, retrieved October 29, 2014). Certainly inclusion is key, but what this means in terms of services and accommodations will be different for each student. A disability counselor works case-by-case with each student (guided by the student’s medical or educational documentation) to determine the precise campus accommodations necessary for equal opportunity. Furthermore, the disability counselor helps the student receive nonaccommodation supports and services from other offices, from faculty, from academic programs, and from residential programs, all depending on the unique needs of that particular student.

Communication coaches

Communication coaching refers to mentoring provided to promote social communication and/or executive functioning skill sets provided as speech–language communication intervention. Rather than using the term therapy, we chose the term coaching to emphasize what we intended to be a collaborative or mentoring working relationship between clients and their clinicians.

Two closely supervised graduate students in the Department of Communicative Disorders’ speech–language pathology program provide communication coaching each semester in the URI Speech and Hearing Clinic. Typically, second-year students are assigned to the CCP. In the CCP, students with ASDs participate in individual and group coaching sessions that focus on improving the social communication and/or executive functioning skill sets of the students through extended practice, depending on their individual needs as determined by discussions among the program participants.

The communication coaching sessions are held once weekly for a 3-hour block of time; students with ASDs may have 1–2 hours of communication coaching scheduled each week, depending on the availability in their schedule as well as the demand for the program in a particular semester. For example, in a communication coaching session, a student with ASD might practice increasing intonation variation in speech to convey emotions as intended, understanding examples of sarcasm when used by others, and developing a
semester-long schedule of examinations and assignments due dates by referring to course syllabi.

**Peer coaches**

Peer coaching is provided by undergraduate students known as “peer coaches.” A peer coach is someone generally closer in age and college experience to the student with ASD who conducts a weekly coaching session on campus but away from the clinic setting with an assigned student with ASD. Within these relationships, the student with ASD has an opportunity to practice the social communication and/or executive functioning skill sets targeted in the clinical sessions provided by the communication coaches. The peer coach aspect of the CCP was developed to foster generalization by providing opportunities for students with ASDs to practice in a supportive context on campus where it made sense to use the new skills taught. For example, some students with ASDs have had difficulty navigating campus, recognizing alternate ways to get to their classroom buildings, and asking for help when lost. Peer coaches may take students with ASDs for “field trips” on the campus bus system, showing them how to get to class in a more efficient and timely manner and how to approach individuals for assistance if lost.

Communication coaches and peer coaches meet periodically with personnel from the DSS as well as their clinical supervisors in the Department of Communicative Disorders to share information and discuss the progress of clients to ensure that the most appropriate goals and treatment programming are targeted. Communication coaches are responsible for submitting all paperwork (e.g., weekly lesson plans, progress reports) expected for any graduate student clinician. Peer coaches submit session plan outlines as well as summaries following each session’s completion for approval. Communication coaches and peer coaches are encouraged to collaborate throughout the semester to better understand the changing needs and skills set of their students; they also participate in the formal meetings held twice per semester with all personnel to review each student’s progress.

**Social skills group**

Students participating in the CCP are invited and encouraged to attend an hour-long social skills group meeting held weekly to provide an additional opportunity to practice and share strategies and experiences of college life with each other. A doctoral student in the URI school psychology program presently facilitates the group meetings. Topics of discussion have included tips for working collaboratively on group assignments, knowing what to say to people when you first meet them, developing friendships, and finding places to study on campus between classes. Social groups have been scheduled to coincide with mealtimes in the university union or based on availability of students. Although the intent of the social group experience has been to encourage participants to seek each other out socially outside of the scheduled meetings, this has rarely occurred to our knowledge. To date, the social groups have not included neurotypical students as social models. The students with ASDs were presented this as an option to change the group’s composition, but they expressed greater willingness to attend the social groups if their membership remained students with ASDs only.

**Additional campus support services**

A number of personnel, programs, and relevant offices interact frequently with DSS personnel and have been important resources for students with ASDs. They include the following:

- **Faculty members** who have students with ASDs enrolled in their classes, and who rely often on DSS personnel for advice regarding effective communication or inclusion techniques for their courses.
- **Academic advisors** as well as **college deans**, who work very closely with disability counselors to help students with ASDs navigate the most appropriate courses for their program including recommendations for course selection,
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course drops, plan changes, or selection of majors.

- The Academic Enhancement Center staff, who provide content tutoring and academic skills tutoring, following referral and with guidance from disability counselors regarding how to support student planning and study-skill building for students with ASD.
- The Writing Center, which provides support to all students but can be particularly helpful for students with ASDs, who may have particular difficulty getting started with and organizing large writing projects.
- Career Exploration departments, which are considered to be the college office that supports job placement for graduating seniors, as well as assisting first- and second-year students to determine their interests and aptitudes in the context of creating a “good fit” in the student’s choice of major. A “good fit” in major and career can be a particularly important component of academic success for the student with ASD (Wolf, Brown, & Bork, 2009).
- The Counseling Center, which provides support in managing the stress that can be inherent in navigating a complex post-secondary environment for any student, but that is particularly critical for students with ASD because of the high incidence of anxiety or other mental health needs in this population (White et al., 2012).
- Health Services, which offers both medical and psychiatric intervention so that CCP staff can collaborate with Health Services personnel, to help students balance medical and counseling needs with academic performance and course responsibilities.
- Housing and Residential Life, which is the office that oversees specifically designed housing accommodations including arranging for a student to have a separate bedroom or other privacy options.
- Enrollment services—Course Registration, which provides priority or early registration for students with disabilities, as well as options to make administrative exceptions to certain deadlines or policies regarding course enrollment.
- Enrollment services—Financial Aid, which can be an extremely complex system of policies and procedures that may require supports from disability counselors.

The multiple supports offered beyond the DSS office represent a constellation of specialized personnel with expertise in working with all students with disabilities, including ASDs. Disability counselors facilitate access to campus-wide support services for the student with ASD. In most universities as well as at the URI, the disability services office collaborates across campus units. Special support programs such as the CCP can help create an inclusive and welcoming environment increasing the likelihood that students will succeed. Utilizing an interdisciplinary team approach, the needs of each student with documented ASD who receives services are discussed formally by staff twice per academic year to ascertain progress and determine if changes to the specific recommendations for each student are needed.

Determining eligibility for the CCP

Determining eligibility for CCP involves consideration of materials that document a student’s ASD diagnosis, discussions of the student’s history of academic successes and needs, support services already received, and any expressed concerns by the student or family member (e.g., making friends, disorganization, being easily overwhelmed by multiple tasks). Students with ASDs who are candidates for CCP participation discuss with their disability counselor the benefits of the program for helping with the student’s transition to college through development of appropriate skill sets that will allow the student to meet new social and academic challenges. Disability counselors who recommend students with ASD to the CCP also discuss their referrals with the supervising speech-language pathologist to present a preliminary description of
each student’s strengths and needs. Discussions about potential matches among the students for the purposes of group coaching are also conducted. Additional on-campus referrals that are likely to be needed by the students are also discussed.

Communication coaches spend their first session administering a series of questionnaires and activities adapted for use with post-secondary students. These include an “intake questionnaire” and “areas of difficulty checklist,” adapted from Wolf, Thierfeld Brown, and Bork (2009); the “double interview,” a “social scenario picture task,” and an “assessment of organizational skills” checklist, adapted from Winner (2007); and a checklist to gather information about conversation effectiveness, adapted from Kowalski (2005). Student responses and ratings are compared with the disability counselors’ impressions and initial goals are set. As a student’s semester unfolds, the reality of the classroom and college campus experience may raise other goals to be more important than those initially selected as part of the intake process. The peer coaches observe all of the students during their communication coaching sessions. It is typically during that time that discussions take place among CCP personnel and suggestions are made about how the peer coach can implement the same goals in a realistic setting on campus. Students are consulted so that the most relevant contexts are selected.

Building awareness among students with ASDs and their coaches

As part of their initial sessions, communication coaches ask the students with ASDs to relate their perceptions of how successfully they can deploy social communication and executive functioning skills for collegiate success. Students are then asked to suggest a priority for which each of the competencies will be addressed during coaching sessions. Frequently, the student’s self-perceptions do not match the data gathered or the observations made by the disability counselors or communication coaches. If a mismatch occurs, a coach or counselor provides clarification for the students with ASDs with examples of successful use of a particular social-communication skill, for example.

One characteristic that is common to most students with ASDs is the expressed belief that success at the collegiate level might involve working harder, but it does not involve working differently. Maintenance of this belief often leads to resistance when qualitative changes to studying are suggested during coaching sessions. Poor performance on examinations may be the only evidence that convinces some students that changes are needed to “business as usual” study strategies. For example, using academic calendars as a resource to plan when to begin work on assignments or to study for tests rather than focusing on due dates represents a major shift in strategy for many students with ASD.

Communication and peer coaches at first frequently characterized the students as “opinionated,” “rigid in their thinking,” and having “poor perspective taking skills,” none of which is surprising, given the characteristics of the population. Through discussions with their clinical instructors and other program personnel as well as background readings, it became clear to the coaches that what they had observed were the characteristics of ASD that would become targets for change in the program.

Students with ASDs typically presented with both social-communication and executive functioning difficulties. However, the resistance so commonly observed to consideration of new organizational approaches to academics was not observed when social-communication skills were targeted. Students in the CCP were uniformly forthcoming in terms of their needs in this area, frequently expressing that their highest priority was to have made a friend by the end of the semester. In fact, several of the younger male students asked for specific lessons that would teach them how to acquire a girlfriend. Regarding this last request, our students expressed surprise that we were unable to provide them with step-by-step directions. Our approach had two parts. One was to have discussions
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about how to be a good friend as well as how to recognize the qualities of friendship in others. The other was to have a student identify a particular interest (e.g., gaming, fencing, animals) and connect the student with groups on campus that were likely to draw others with similar interests.

EVIDENCE OF EFFECTIVENESS OF THE CCP

Participation, retention, and completion outcomes

Over the course of the 5 years that the CCP has been operational, 55 students (41 males and 14 females) with diagnoses of ASDs have registered for services through the DSS office. Of those 55 students, 23 (15 males and 8 females) or 42% of the students with ASDs known to the disability services office have participated in the CCP in some or all aspects of the program. Of the 23, 3 students transferred into the URI at the beginning of their junior years; the remaining 20 started their freshman years at the URI.

Comorbidities were the rule rather than the exception. Sixteen of the participants had documentation of ASD as their primary disability; seven of the participants presented with other primary disabilities, specifically, mental health (3) and learning disability (4). Data concerning the referral source to the DSS are incomplete. A parent was the referral source for nine students from the CCP participant cohort, which would require their child’s permission if the child had reached the majority age of 18 years. One student self-referred, an administrative official (e.g., dean, resident advisor, faculty member) referred an additional five, but the remaining eight students’ pathways for reaching the DSS office were not recorded.

As is evident by the aforementioned data, not every student with ASD known to the DSS office participated in the CCP between 2010 and 2015. Some students needed counseling services, usually for anxiety issues, prior to possible participation in the CCP. Through our own experiences, we have learned that having bona fide counseling and other necessary supports in place to address these students’ manifestations of anxiety serves as a foundation for success in the academic and social arenas. Other students were invited but were hesitant to devote the minimum additional 3 hr per week needed for participation (i.e., at a minimum, students with ASDs must be regularly enrolled in disability counseling, as well as a scheduled hour of communication coaching and a related hour of peer coaching per week, constituting 3 hours total). Several students have expressed that they believed they would be successful without our help and declined to participate. Finally, scheduling and personnel limitations prevent us from providing the CCP for all students on campus who might be interested in its services. In several semesters, we have run at capacity, meaning that there were six students who attended communication and peer coaching sessions as well as disability counseling. There were other semesters when the program functioned at half capacity, with as few as three students.

Individual students in the CCP have participated for as many as four semesters and as few as one; however, the average number of participating semesters has been 2, and generally those have been the fall and spring semesters of a student’s freshman year. A number of the students who have completed one semester to date have not returned because of scheduling conflicts, reluctance to commit to the time involved in the full program, and a few have made so much improvement in their executive functioning and/or social-communication skills that a full program was no longer recommended. Thus far, eight of the students who have participated in the CCP have graduated from the URI. During the same time period, to our knowledge an additional 10 students with

1Although the work reported here was not designed as experimental research, Human Subjects Institutional Review Board protections were in place covering the publication of this report.
ASD who did not participate in the CCP graduated from the URI, including two graduate students. None of the students who participated in the CCP has been dismissed from the university, although five students with ASD who were nonparticipants have been dismissed in the last 5 years for inability to maintain adequate grades.

Progress achieved in communication coaching sessions

Analysis of progress reports completed by the communication coaches revealed that the majority of the students who participated in the CCP achieved appreciable gains for three general goals: (1) improvement of executive function/planning needed for academic and social activities, (2) improvement in the ability to set relevant and attainable goals, and (3) improvement of social-communication skills through conversation management. More specifically, the executive function/planning skills addressed that were most likely to show gains were the ability to meet deadlines, demonstration of appropriate problem-solving for problems incurred in academic contexts, the ability to maintain an updated calendar for academics and social engagements, and developing a repertoire of appropriate language for use in communicating with instructors both in and outside of the classroom. In the area of goal setting, students showed improvement in stating their goals concisely, creating multiple strategies for goal attainment, and prioritizing their goals through time apportionment. Finally, improvement in social-communication skills was evident in tasks requiring perspective taking, reading the nonverbal cues of others, and managing conversations through topic initiation and maintenance. Students also made progress in identifying distracting behaviors that might draw a conversation partner’s attention away from the content of the conversation.

Student feedback

At the close of each semester, students with ASDs were asked to complete a brief questionnaire that asked them to share their perceptions of what had been learned over the semester. In terms of executive functioning skills, students who participated in the CCP regularly reported that the ability to keep a weekly schedule to keep track of what assignments were due when as the one competence that made an impression on them. Other responses indicated that the students had learned something about making reasonable goals as well as meeting them.

Social-communication skills appeared to have captured the most attention among the students in the CCP. Some students mentioned that they were more confident in conversations with people they did not know, they knew how to relate to others in a group setting by looking for nonverbal cues, and they had learned to pay attention to their own tone of voice. Some students who had worked specifically on preparing for job interviews mentioned that this was a skill set they remembered and intended to apply.

DISCUSSION

Although students are expected to arrive at college relatively independent and ready to achieve success, many students with ASDs who participated in the CCP needed specific supports to help them navigate the complex university environment. If living on campus, this independence often translated to making the decisions and choices involved in maintaining adequate nutrition, meeting their day-to-day health needs, as well as conforming to expectations for personal hygiene and maintaining their safety.

Executive function skills needed

If a preschool child can be baffled by the “hidden curriculum” of the kindergarten classroom (in terms of subtle teacher and peer expectations about social behavior), the student with ASDs entering postsecondary education may face similar confusion in the college classroom without supports in place. For example, recognition that course syllabi contain important information and that a student should
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plan to refer to them often (e.g., due dates for assignments, test dates and locations, office hours), as well as how to find them, often became an explicitly taught skill.

Rules and regulations for interacting with professors as well as expectations for behavior in the classroom with other students were two areas frequently addressed in coaching sessions. With few exceptions, our students with ASDs demonstrated that they did not know that their professors would be using e-mail and not texting for communication purposes with students. They needed to be taught to check their e-mail accounts at least once daily to receive updates to keep current.

Another important topic was the protocol for participating in classroom discussions. The subtleties of complex social interaction cues within such contexts were usually beyond the experience or easy learnability for students in the CCP, but they were critical to learn. Expectations for how one enters a discussion, the formality of the language used, the way intonation is used to signify disagreement or displeasure in classroom activities, as well as the logical sequence of topics that most students and professors recognize as acceptable ways to add to that discussion were often unknown or misunderstood. Students were taught that, when these boundaries are crossed, one’s audience may react with fear at what is perceived as a student’s aggression. It is critical to teach these consequences early so that students with ASDs can become aware that professors may view unintended expressions of anger and frustration in a classroom as a signal of impending danger, possibly even leading to a student’s expulsion. We worked with several students who expressed surprise at how their unintentionally harsh actions and words had concerned others. Using scenarios based on likely classroom and campus interactions, we demonstrated alternate, more acceptable ways of reacting to situations other than with anger and frustration. Often these scenarios were presented as scripts for role-playing activities. Students, coaches, and counselors always discussed the alternative action plans.

Another skill we found lacking was note taking. Most college students find note taking in class advantageous for studying especially if you have a system for organizing those notes, but this assumes that you are able to pick out the important points in a lecture. Many of the students in the CCP needed extensive assistance with note taking as well as more general study habits. Several of our students reported that it was never necessary for them to take notes in high school and thus they were clueless about why it would be necessary for them to begin at this stage. The technology used by most professors, PowerPoint slide sets for lectures, and a centralized Web-based repository for course materials were not familiar to our students with ASDs. Not only could they not access course materials but also, once accessed, they needed to be taught about their significance and how to go beyond the professor’s notes to add their own.

Students’ schedules often have gaps during the day when there are no classes. It is assumed that during these times that students will work on their assignments or care for other daily needs, but that may not be apparent to students with ASDs. Making productive use of time on a daily basis with a collegiate schedule is dramatically different from the way a typical high school student has to manage time. Several of our students slept between classes, either in their dormitory rooms or on couches in the student union. One student typically left campus after his 8 a.m. class 3 days per week and did not return until a late afternoon class. When asked if he studied during this gap in the day, he looked at us incredulously and announced he had been sleeping. Another student did not remember to eat lunch unless this activity was specifically scheduled for him.

Social–communication skills needed

Most professionals are somewhat familiar with the common types of difficulties students with ASDs have during social interaction (Brown et al., 2009; Winner, 2007) and the students in the CCP were no exceptions. The prototypical social communication
difficulties encountered are often related to the lack of social perception or perspective taking that pervades social encounters. For example, recognizing emotions and reacting accordingly are often not part of their repertoire.

Students have told us that they could not determine who was an accessible conversation partner and who was not. This is a significant problem when you are trying to make a friend. In fact, the majority of the first-year students we have worked with have reported talking to few people in their classes or in their dormitories, regardless of their living situation. For example, students with ASDs are often literal in their comprehension of language so that sarcasm is missed or misunderstood, and they may not know when they are on the receiving end of a joke or being teased. Many CCP students have reported histories of having been bullied in high school.

Furthermore, most types of abstract or figurative language are not understood, whether at a single-word level (e.g., calling someone “cold” or “hard-nosed”) or related to common idiomatic expressions (e.g., “That’s the way the ball bounces”). Related to this difficulty, comprehending jokes can be difficult. Although the intent in coaching was never to create accomplished joke-tellers, coaches did attempt to explain where the humor was in a joke or riddle or cartoon that was perceived as funny by others.

When engaged in conversation, students in the CCP often had difficulty paying attention to topics already introduced. Many persisted in talking instead about a small set of favorite topics that clearly were not of interest to their communication partners or that represented nonsequiturs. Given that nonverbal cues are typically difficult for persons with ASDs to recognize, our students’ conversation partners needed to learn that the only way to alter the conversation flow was to do so explicitly. Subtleties of conversation such as the use of semantic softeners to convey understanding (e.g., “maybe,” “I wonder if”), or using language to persuade or negotiate would be missed, and as a result, speakers with ASDs were often viewed as blunt and insensitive by their conversation partners. Our students’ professors and resident hall advisors reported this latter behavior on several occasions as causing serious discord in the classroom or in the dormitory. These incidents were typically discussed with the student by the disability counselor and followed up by coaches through lessons about how to use perspective-taking skills in conversations.

Communication coaching also has addressed boundary violations of personal space (sometimes a culturally based phenomenon) by pointing them out to the students, helping them correct their perceptions of appropriate space, and practicing maintaining those spaces. Sometimes the boundary violations have been verbal. That is, a student might fail to recognize that a topic or choice of language register (e.g., the use of slang, informality, verbs of violence) is inappropriate for some audiences most or all of the time. It is even more difficult for our students to understand that some topics may be appropriate some of the time, but in specific contexts. When incorrect choices of topic were made, coaches and disability counselors provided explicit follow-up, including explanations of the student’s error and suggestions of alternate, acceptable behaviors.

Guiding principles

In developing the CCP, we followed several guiding principles. The first was to construct a program that allowed for individualization. Thus, building in programmatic flexibility would encourage us to meet specific students’ specific needs. Just as the use of the term autism spectrum disorders describes a continuum of disorder severity, our support program, developed to serve postsecondary students with ASDs with inherent heterogeneity, would include a menu of services provided by a variety of university personnel, coordinated by a central core of case management personnel. What has evolved is a program that in practice operates like a menu of options. All students are assigned and in regular communication with a disability counselor. Beyond
that ongoing connection, one student’s participation in the CCP might look different from another’s. For example, in a given semester, a student might have the schedule flexibility to participate in communication coaching, peer coaching, a weekly social group, and additional resources (e.g., Academic Enhancement Center, counseling for anxiety). Another student might be receiving counseling services for anxiety in preparation for eventual participation in communication coaching.

A second principle followed was that the CCP would evolve over time as we became more familiar with the students’ changing needs or changing availability of university resources. To stay true to that principle, we used feedback gleaned from the set of questionnaires administered at the end of each semester to collect the impressions of all participants about the success of the program. As noted, communication was also enhanced through frequent meetings; both formal staff meetings and informal discussions were held throughout each semester. Initially, each student with ASD was assigned to his or her own peer coach; in the past few years, we have assigned 2–3 students to each peer coach. This change ensured more frequent communication between the peer coaches and communication coaches. Similarities and differences in approaches to individual students became more obvious and we believe that better service delivery followed.

Our third principle was relevance. That is, we based general goals on the expectations for postsecondary students’ performance. There are a number of excellent resources for professionals interested in learning about the needs and strengths of students with diagnoses of ASDs especially as they relate to college students (Brown et al., 2009; Gordon & Keiser, 2000; Kaufman & Larson, 2005). Given the number of transfer students who became part of the CCP as well as the number of juniors and seniors participating with us since beginning the URI, we focused many of the communication and peer coaching sessions on employment preparedness (e.g., interviewing skills, appropriate attire for interviews, improving personal hygiene, scheduling that allows for timeliness).

Reading through descriptions of the skill sets frequently missing or deficient in the preparation of college students with ASD, it may occur to the reader that many nondisabled first-year college students also demonstrate that they are lacking in their preparation for the increased academic and social demands that college brings. This may be true for some, but students with a diagnosis of ASD are more likely than their nondisabled peers to have significant difficulties generalizing to new situations, demonstrating flexibility with problem solving, or initiating the seeking out of assistance. These students display varying levels of anxiety about failure in their new environment, and many cannot adequately function without consistent, frequent, step-by-step instruction.

Implications for earlier transition programs

It was our experience, judging from the preparedness of our participants in the CCP, that the high school support services they had received had not been incorporated early enough or comprehensively enough to ensure seamless transitions to postsecondary education (see Retherford & Schreiber, 2015, in this issue, for a program that might help close this gap). Closely related to this situation was the degree to which individual student’s families had been prepared for the change in supports that can be expected in the transition from high school to college. That is, the focus of federal disability law changes between high school and college. During secondary school, students and their families enjoy the right to a free appropriate public education as per provisions of the Individuals with Disabilities Education Improvement Act (2004).

Once they enter college, however, education is viewed as a privilege with oversight of federal civil rights and equal opportunity laws. Although federal legislation mandates that throughout high school, students be educated in the least restrictive environment, and in college the Americans with Disabilities Act
Amendment Act of 2008 (P.L. 110-325) (2008) requires that students be granted equal access to education. For example, extra time for examinations is a common accommodation for students with documented disabilities in college; however, university professors are not expected to adapt a course curriculum for a student because of the documentation of a disability.

Fortunately, a growing number of colleges have recognized the special support needs of students in this population and have put together a variety of programming to meet this challenge (see other articles in this issue and resources at http://www.collegeautismspectrum.com/collegeprograms.html, and http://www.autismspeaks.org/family-services/resource-library/post-secondary-education-resources, both retrieved October 13, 2014, for a listing of some of the available college-based programs). In addition, there are unadvertised support programs in existence such as our own CCP because the need for individualized support is well recognized among personnel charged with readying these students for the college experience. Parents are advised to carefully examine the Web sites of prospective schools. Prenrollment visitation with a disability counselor would be an excellent way to learn about available supports, including individual professional services as well as more comprehensive programming.

Many of the college or university programs listed on these Web sites indicate that there is an additional academic year or per-semester fee above tuition to offset the cost of programming specific to supporting students with ASDs. Along with differences in the types of accommodation provided, families often express surprise to learn that provision of special individualized supports (beyond those already provided by the university for all students) such as weekly academic counseling, academic enhancement tutoring, socialization groups, and speech-language therapy for their child may require a financial commitment beyond the regular tuition charge. As Hewitt (2011) pointed out, this is sometimes a sticking point with families who have not had to pay for the services provided by their local school district prior to their child’s entrance in college. At this point in time, the CCP does not charge for its services above the typical tuition rates for the URI, primarily because there is no ready-made mechanism to do so. However, unless we develop a fee structure to provide revenue for the hiring of additional personnel, we will not be in a position to offer the CCP to all of the students with ASD who are eligible and interested in attending the program.

**Capitalizing on students’ strengths and preparing for employment**

It has long been reported that many individuals with diagnoses of ASD have particular interests that they pursue with a passion. In our experience, some students have been strongly invested in pirates (and piracy on the high seas), independent rock bands, little-known facts about U.S. presidents, and memorizing dialogue from favorite television programs.

A strong, singular focus might serve as a definite benefit to an employer. Given that many individuals with diagnoses of ASD are less interested in social pursuits than their neurotypical peers, the employee with ASD might provide an employer with long stretches of work uninterrupted by the draw of friends and social engagements. However, along with the drive to stay on task at work, if that task represents their passion, employers will probably have to learn as college instructors do, that directions must be provided in unambiguous, precise language with attention to avoiding figurative language expressions.

The Asperger Syndrome Training and Employment Partnership (ASTEP) is an example of an organization that fosters the development of workplace adaptations for employees with Asperger syndrome and others with diagnoses of ASD. By working with current employers, potential employers and vocational support personnel, the ASTEP offers its services to create more inclusive working environments. Their Web site provides resources for individuals with ASDs who are seeking
CONCLUSION

After painting a picture of the difficulties that may be experienced by college students with a diagnosis of ASD, it is appropriate to point out that there are students with autism who do quite well in a college environment despite their diagnosis. In fact, one of our first participants in the CCP had been the president of his senior class in his private high school. Although he found social communication in college to be a challenge on a day-to-day basis, he approached his difficulties head-on. We were thrilled when he reported to us that he had arranged for a particular summer job because he recognized that he would not be able to avoid talking to people. Of course, we were gratified when he mentioned following that summer that he had found his job easier than he had anticipated and had used several of the techniques we had suggested for him. A very bright person, as so many of our students with ASD are, he graduated with a degree from a rigorous academic program and is now employed in his chosen field.

We note that Dr. Temple Grandin, as a person with ASD, has contributed much to understanding the experiences and successes that are possible for a person with a diagnosis of ASD (Grandin, 1996, 2008). Through her autobiographical memoirs, Grandin has furthered the understanding of how persons with ASDs may perceive and interact with a world largely at odds with their own worldview. Moreover, characters in popular media from network television (e.g., Dr. Sheldon Cooper in The Big Bang Theory series) to PBS (e.g., Carl, a character described as having “Asperger’s syndrome” in the cartoon series Arthur), to the protagonist in the novel The Rosie Project (Simsion, 2013) provide positive examples of what it is like to behave and think differently than peers. They are portrayed as being frequently baffled by the way people with ne-
will provide evidence-based curricula and procedures to guide us in this pursuit (http://fpg.unc.edu/projects/center-secondary-education-students-autism-spectrum-disorders-csesa, Retrieved February 18, 2015).

In addition, the Waisman Center’s Lifespan Family Research Center Web site, specifically for their study “Adolescents and Adults With Autism: A Study of Family Caregiving,” provides links to several publications based on the investigators’ longitudinal research project. Two suggested documents that interface well with considerations of college success for students with ASD are titled: “The transition out of High School and Into Adult Life for Young Adults With Autism Spectrum Disorders” (http://www.waisman.wisc.edu/family/reports/autism/report13.pdf) and “Transitioning together: Developing an Education and Support Program for families” (http://www.waisman.wisc.edu/family/reports/autism/aaareport14.pdf).

Finally, we agree with the conclusion expressed by Barnhill (2014) and Gelbar, Smith, and Reichow (2014) that many more research studies are needed before it is understood how to provide the best programming for post-secondary students with ASD. These investigators found little available experimental data supporting particular treatment programs. Although we have provided some qualitative and quantitative data gleaned from CCP participants in an attempt to evaluate the utility of our CCP program, the evidence would be strengthened if we could improve our tracking of student participants’ progress throughout their college experience in comparison with students who do not participate in the program. In addition to better data collection, we plan to do postgraduation follow-up interviewing to determine whether any impact of the CCP can be detected in our former students’ lives.

REFERENCES


Implementing a Communication Coaching Program for Students with ASD


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