

EDUCATING COLLEGE STUDENTS WITH AUTISM SPECTRUM DISORDERS

Major activities conducted during the grant period included (a) development of a manual to help faculty accommodate students with autism spectrum disorders in college courses, (b) production of a training video to illustrate strategies for faculty to increase academic engagement of students with ASD, and (c) dissemination of information through presentations and publications to increase understanding of student learning differences at the college level.

Project Rationale

This project addressed the critical need for effective college support services for young adults with autism. The purpose of the project was to help close the gap between the level of college support currently available to students with autism spectrum disorders (ASD) and the growing number of students with ASD that wish to attend college. The major goal of this project was to improve the ability of college faculty to effectively educate young adults with autism. In essence, the project provided learning opportunities to help college professors better understand the unique learning challenges associated with ASD, and to enable them to effectively employ classroom strategies to empower all students to succeed. Funds provided were used to develop an instructor's support manual and training video to provide guidance to faculty teaching students with ASD in their classes. The primary target audience was faculty at Pace University. In addition, accessibility and portability of training materials contributes to the likelihood that they may be used at other colleges and universities.

The faculty training manual describes and explains learning, behavior and communication challenges confronted by high functioning students with autism spectrum disorders. Accommodations to enhance academic success are delineated, described and cross-referenced with specific behaviors. Academic challenges that are addressed include (a) information processing difficulties, such as limited auditory comprehension especially when confronted with fast-paced language; (b) poor ability to understand or apply abstract concepts; (c) distractibility and short concentration span; (d) weak organizational skills; (e) difficulty understanding subtle cues or body language; (f) poor time management; (g) hyper-sensitivity to particular sounds, smells, and lighting; (h) self-regulation problems; and (i) difficulty with theory of mind, such as understanding reasons for other people's actions. Case studies have been included to illustrate how specific techniques can be incorporated into inclusive college classes. Strategies to increase engagement and active participation in classes are emphasized. Information is presented to provide examples that show instructors how to foster increased focus on classroom lessons, enable all students to be valued contributors, differentiate presentations to reach a greater number of students, assign work that permits students to utilize their particular strengths to complete tasks, and administer tests in a manner that enables all students to demonstrate their level of competence in subject matter.

A professional quality video has been developed to complement the manual and to demonstrate in-class techniques for (a) presenting information to foster understanding, (b) differentiating activities and assignments to increase engagement, (c) designing group work to enable all students to be active participants, (d) directing students to focus on salient information, (e) helping students ask questions and communicate in class, (f) scaffolding instructional

activities to enable students with information processing challenges to understand tasks, and (g) designing tests that provide opportunities for students to demonstrate their knowledge.

Key project staff included the Michael Koffler Professor in Autism and Founding Director of the OASIS Program, the Director of the Pace University Communication Science and Disorders Program, and the Director of Aaron Academy. The manual was completed as summer and intersession work, beyond the regularly contracted nine month assignment for faculty. The video, developed by Ken Browne, an Emmy Award winning filmmaker, will be available in March 2012. Announcements of the availability of the training materials will be distributed to college offices for students with disabilities, professional organizations. Information will be disseminated at the CEC national conference and the annual Project Directors' meeting of Office of Special Education Programs of the U.S. Department of Education.

Below is a list of objectives that the project addressed:

Project Objectives and Steps/Activities:

- Develop a manual to help faculty accommodate instructional needs of students with autism spectrum disorders in college courses.
 1. Conduct a comprehensive review of the extant literature to identify evidence-based strategies for teaching academic content to secondary school-aged and college students with autism spectrum disorders and related learning challenges.
 2. Survey students with ASD at Pace to determine perceived areas of difficulty in their college classes.
 3. Survey professors at Pace to identify specific issues they have encountered with students with learning challenges in their classes and how they have addressed these issues.
 4. Analyze findings from the literature review and surveys to determine specific goals and content for the training manual.
 5. Develop a reader-friendly manual for use by college faculty to increase understanding of autism and provide suggested strategies for effectively including students on the spectrum in class.
 6. Conduct a pilot field test of the manual at Pace.
- Create a training video to illustrate strategies that may be utilized to increase successful academic engagement of students with ASD.
 1. Conduct a comprehensive review of the extant literature to identify evidence-based strategies for teaching secondary school-aged and college students with learning and behavior challenges.
 2. Survey students with ASD at Pace to determine perceived areas of difficulty in their college classes.
 3. Survey professors at Pace to identify specific issues they have encountered with students with learning differences in their classes and how they have addressed these issues.
 4. Analyze findings from the literature review and surveys to determine specific goals and content for the video.
 5. Coordinate development of the video with the instructor's manual to create three one-hour faculty training workshops.
 6. Refine the manual and video

- Disseminate information through presentations and publications to increase understanding of student learning differences at the college level, and to provide information regarding strategies for accommodating students on the autism spectrum.
 1. Prepare and submit manuscripts related to college success students on the autism spectrum.
 2. Prepare and submit articles for inclusion in newsletters, including but not limited to Autism Speaks and Autism Spectrum News.
 3. Present sessions at meetings attended by higher education faculty, including but not limited to the Council for Exceptional Children and the U.S. Department of Education Project Directors' annual meeting.
- Provide an instructors' manual and video to faculty at Pace and other colleges and universities to help them effectively educate students with autism spectrum disorders.
 1. Announce availability of the training products to professional organizations, parent groups, and colleges/universities
 2. Provide copies of the manual and video for use by Autism Speaks

Project Outcomes

A comprehensive review of extant literature in the areas of postsecondary education and transition was completed to identify evidence-based strategies for teaching academic content to students with autism spectrum disorders and related learning challenges. This literature review was incorporated throughout the faculty manual, as well as in the annotated reference section. The Director for the Division on Student Success at Pace University joined our team and assisted in the preparation of annotated references as part of her doctoral program requirement.

In addition to the literature review, information gleaned from student and faculty surveys was utilized to guide the content and writing of the faculty manual. Prior to beginning writing the manual, a survey of undergraduate and graduate faculty at Pace's New York City and Westchester campuses was conducted through Survey Monkey to identify specific issues that instructors have encountered with students with learning challenges in their classes, how they have addressed these issues, and perceived needs for better serving learners on the spectrum. The survey was sent to 122 faculty members and was distributed via email twice to strengthen the response rate. A total of 62 surveys were completed; the response rate was 50.8%. Information from the survey confirmed that topics included in the grant proposal were, in fact, perceived areas of need by faculty at our university.

A reader-friendly manual for use by faculty, to increase understanding of characteristics of students with autism and provide research-based strategies for effectively including students with autism spectrum disorders in college classes was completed in November 2011. The manual will be published by Routledge/Taylor and Francis Publishing. The text provides information to help faculty productively engage students with ASD while continuing to meet the needs of all students in their classes. Strategies included in the manual should prove useful for teaching college students of varying ability levels with diverse learning styles. The strategies included are grounded in principles of Universal Design for Learning (UDL) and are research-based best practices for instruction.

Each individual component of the model presented is scientifically-based. The new configuration, or package of strategies, is put forth as a model of emerging best practices for college instruction. Further research on the newly configured model is underway, as it is believed

that the combined power of these scientifically-based practices is significantly greater than the provision of the individual strategies in isolation.

The manual has four sections, including the (1) *Introduction* section to explain who these students are, why they are arriving in greater numbers at colleges, and legal mandates regarding students' educational rights and college/professorial responsibilities; (2) *In the Classroom strategy* section that considers specific learning characteristics and styles of students with ASD and provides recommended strategies for engaging and assessing students on the spectrum; (3) *Case Studies* to highlight student and faculty experiences and illustrate approaches that have been successful in dealing with challenging situations; and (4) *Annotated Resources* for additional information about teaching and supporting students on the autism spectrum.

Production of the training video has been completed. The film complements the faculty manual and will be useful in faculty development programs. It is both motivational and illustrative. Students, parents, professors, and staff have been interviewed on film. Actual class scenes were included in the film. Attention was directed toward highlighting strategies that could be utilized by faculty to increase successful academic engagement of students with ASD.

Information is being disseminated through presentations, newsletter articles, and publications to increase understanding of student learning differences at the college level, and to provide information regarding strategies for accommodating students on the autism spectrum. Examples of publications include an article published in *Autism Spectrum News* on components of postsecondary education support, and a text titled, *Educating Students with Autism Spectrum Disorders: Research-Based Principles and Practices*, which was released in July by Routledge/Taylor and Francis Publishing. There are two chapters in the text dealing with transition and postsecondary issues.