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DO-IT: Helping Students With Disabilities Transition to College and Careers

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Summary

This publication summarizes research on issues related to positive school and employment outcomes for students with disabilities. Second, it describes one program, DO-IT Scholars, that successfully applies research findings in a cohesive set of interventions for students who have disabilities. Last, it shares lessons that can be applied to other college and career preparation programs for teens with disabilities.

Research Findings

Individuals with disabilities experience far less career success than their non-disabled peers, however differences in achievement diminish significantly for those who participate in postsecondary education (Blackorby & Wagner, 1996; Yelin & Katz, 1994). A bachelor's degree or higher is a prerequisite for many challenging careers, including high-tech fields in science, engineering, business, and technology. Few students with disabilities, however, pursue postsecondary academic studies in these areas, and the attrition rate of those who do is high (National Science Foundation, 2000; Stodden & Dowrick, 2000). Lack of job skills and related experiences also limit career options for people with disabilities (Colley & Jamieson, 1998; Unger, Wehman, Yasuda, Campbell, & Green, 2001).

Success stories of individuals with disabilities in high-tech fields demonstrate that people with disabilities can overcome barriers imposed by inaccessible facilities, curriculum materials, equipment, and electronic resources; lack of encouragement; and inadequate academic preparation and support to bridge between academic levels and employment (American Association for the Advancement of Science, 2001; Burgstahler, 2002a; National Center for Education Statistics, 2000; National Council on Disability and Social Security Administration, 2000; Schmetzke, 2001). It is no surprise that the Presidential Task Force on Employment of Adults with Disabilities (1999) recommended that immediate steps be taken to ensure that students with disabilities fully participate in postsecondary education programs and are adequately prepared to secure meaningful employment.

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Steps to challenging careers for students with disabilities include preparing for, transitioning to, and completing a college education; participating in relevant work experiences; and transitioning from an academic program to a career position. Research studies have identified successful practices for bringing students from underrepresented groups into challenging fields of study and employment (Cunningham, Redmond, & Merisotis, 2003; National Science Foundation, 2001). These include:

- access to technology;
- programs that bridge academic levels to school and work;
- work-based experiences;
- peer support; and
- mentoring.

Furthermore, comprehensive programs, such as the Advancement Via Individualized Determination (AVID) in California; Rhode Island Children's Crusade; and Disabilities, Opportunities, Internetworking, and Technology (DO-IT) in Washington, have been found to be more successful in recruiting, training, and retaining students with disabilities than isolated efforts (Benz, Yovanof, & Doren, 1997; Burgstahler & Kim-Rupnow, 2003; Cunningham, Redmond, & Merisotis, 2003; National Science Foundation, 2001; Phelps & Hanley-Maxwell, 1997; Unger, et al., 2001).

Research to Practice: The DO-IT Scholars

DO-IT at the University of Washington applies research findings in preparing young people with disabilities for college and careers in the DO-IT Scholars program. The National Science Foundation and the State of Washington have funded this program since 1992. After being accepted into the DO-IT Scholars program through a rigorous application process, most students begin participation during their sophomore year of high school.

Technology

DO-IT scholars are provided with computer equipment, assistive devices, and Internet access in their homes. Assistive technology includes speech output systems for people who are blind or have disabilities that affect their reading ability, and speech input and alternative keyboards for people who do not have full use of their hands. Scholars rank computer

and Internet skills as the most valuable skills gained from DO-IT for supporting their academic and career goals. One scholar reported, "I learned that I could really use computers effectively." Another scholar stated, "... the technology really helped me at the time because there was no way I could afford a computer then." Another summarized, "DO-IT has shown me that information is empowerment, and that through computer and social networking there is virtually free access to information for everyone." In terms of the computer and Internet activities within DO-IT, parents and scholars both rank their value in developing career/employment skills highest, followed by academic skills, and then social skills (Burgstahler, 2002b; Burgstahler & Kim-Rupnow, 2003).

Mentoring and Peer Support

DO-IT scholars use electronic communications and personal meetings to connect with peers as well as adult mentors, most of whom have disabilities themselves. Through mentors, students learn about career options and how to be more independent, to advocate for themselves, and to persevere. "Mentors [show] how you can be successful in your chosen field despite your disability," shared one scholar. Experienced scholars mentor younger participants. The leadership skills they develop extend beyond the scholar program. One parent reported that her son, a scholar with attention deficit disorder (ADD) helped another child with ADD "by taking the boy to register for high school and showing him around so he will know where things are on the first day of class."

DO-IT staff and mentors pose discussion questions to the group via electronic mail and share information about school, internships, and resources. Smaller groups focus on access challenges for specific types of disabilities. After several years of participation, one scholar summarized, "I've been prepared for my future in academic, social, and employment aspects. I'm excited and eager to see what the world has to offer now that I've participated in the DO-IT program, not to mention all the great friendships and fun times I've had." DO-IT demonstrates that peer and mentor support, traditionally provided in person, can be delivered within a supported electronic community (Burgstahler & Cronheim, 2001).

Summer Study With College and Career Preparation Activities

DO-IT scholars attend study sessions held during two consecutive summers at the University of Washington. They learn how to maneuver around a large campus, request disability-related accommodations, get along with roommates, and succeed in college courses. One DO-IT scholar summarized the program's impact this way: "It showed me that I really can succeed in a college setting." Scholars report developing social and self-determination skills that lead to success in academics, employment, and adult life. They also become more aware of the challenges other students face as they work with peers who have a

wide variety of disabilities, including sensory impairments, mobility impairments, learning disabilities, chronic health conditions, and psychiatric disorders. In a science lab, it is not unusual to find a student with vision impairment working with someone without functional use of hands to perform bypass "surgery" on a sheep heart. They learn quickly, using their combined abilities, how they can complete the lab assignment.

When parents were asked to rank which skills the summer study developed in their children, they ranked social skills highest, followed by career/employment skills, and academic skills (Burgstahler, 2002b). When scholars were asked which

Applications of Lessons Learned

What lessons can be learned from the DO-IT Scholars program to inform others as they help young people with disabilities transition to college studies and careers? Successful strategies include:

Computer and Internet Access

Give students with disabilities access to computers, assistive technology, electronic communication, and Internet resources at an early age. Make sure computing resources in schools, such as computer labs and educational software, are accessible to students with disabilities.

Peer Support

Help connect college-capable youth with disabilities with other teens who have disabilities. Encourage relationships among students with a wide variety of disabilities; these connections can help them understand their own challenges and solutions and gain insights into the potential and accommodation needs of others. Being more aware of challenges faced by other people can help them become leaders and mentors to others.

Mentor Support

Create situations in which young people with disabilities can gain access to role models who have disabilities and are successful in challenging careers. Promote mentoring relationships between young people and adults with disabilities. Use the Internet to sustain these relationships.

College Preparation

Have students visit college campuses, learn about resources, and become experts on the assistive technology and other accommodations they need before the end of their high school years. Offer programs that bridge the gap between high school and college, between two-year and four-year schools, and between undergraduate and graduate studies. Encourage them to take high school courses, such as math and science, that will maximize their options for academic majors when they go to college.

Work-Based Learning

Provide opportunities for young people to participate in paid and unpaid work experiences. Through internships, job shadows, volunteer work, and other work-based learning experiences, they can prepare for future employment, learn how to self-advocate for accommodations, and practice job-related skills. Seeing their potential for careers will also motivate them to succeed in school (Burgstahler, 2002b).

specific skills the DO-IT Summer Study program helped them develop, they rated social skills highest, followed by academic skills, and then career/employment skills (Burgstahler & Kim-Rupnow, 2003). When they were asked what summer study experiences were most valuable for their personal, academic, and career development, computer and Internet use was a clear leader, followed by activities related to college preparation, development of personal relationships, and career skills. One participant said, “I’m...learning skills needed to succeed in college.” Another reported, “I learned how to advocate for myself.”

DO-IT does not end on the last day of the on-campus program. As soon as scholars return home, they log on to the Internet to continue their friendships. “It’s kind of like going to summer camp,” reports one scholar, “but to a certain extent I don’t ever have to go home.” Year-round online communication enhances the value of summer study activities.

Work-Based Learning

During summer study, the scholars begin to explore career fields. In addition, employment preparation experiences year-round give students opportunities to develop résumé writing, problem-solving, and interviewing skills; apply academic, vocational, and computer skills to work situations; and learn to work with supervisors and coworkers. Students practice disclosing their disabilities as well as negotiating and testing the effectiveness of specific accommodations in job settings.

During their third year, scholars have the option to return to the DO-IT Summer Study program as interns. They help with the work that goes on behind the scenes and share their experiences with younger participants. Opportunities to participate in internships at high-tech companies are also available to scholars. They report value gained from these experiences, including enhanced communication skills, greater confidence and motivation to study and work towards a career, job-related skills, and an understanding of how best to work with supervisors and coworkers (Burgstahler, 2001). For one scholar, participation helped him realize “that I can have a normal adult life and that my disability really should not stop me from pursuing a career that is interesting to me.”

Overall Signs of Success of the DO-IT Scholars Program

A total of 218 students with disabilities have participated in the first 10 years of the DO-IT Scholars program. Of the 168 scholars who have graduated from high school, well over 90% are currently attending or have attended college. Twenty-six have graduated from college, and five are enrolled in or have completed graduate school. Two earned master’s degrees, one in physical therapy and one in audiology. Scholars’ fields of study and employment include business, mathematics, biology, chemistry, computer science, ecology, engineering, nutritional sciences, pediatric psychiatry, physical therapy, physics, pre-medicine, and speech and hearing sciences. One scholar who is blind completed degrees in mathematics and computer science and is now a Rhodes Scholar at Oxford.

When DO-IT scholars were surveyed to determine the long-term impact of key program components, respondents reported growth in their level of preparation for college and employment and their self-advocacy skills. One scholar reflected that participation in DO-IT “helped me to understand more about myself and the people in the real world. I have learned how to adapt to society without thinking that I am disabled, that I am useless.” Another said, “I’m less shy now that I know there are more people out there that are just like me!” Others reported that DO-IT helped them keep their expectations high (Burgstahler & Kim-Rupnow, 2003).

When parents were asked to what degree participation enhanced their children’s lives, in descending order, their responses were interest in college, perception of career options, self-esteem, and self-advocacy skills (Burgstahler, 2002b). As summarized by one parent, “My son has benefited greatly from the DO-IT program. He was able to realize that many other students had to struggle through school. DO-IT camps allowed students to bond, and the computer networking allowed them to continue to support each other through the year. He did not dwell much on the future until he attended DO-IT Camp. He came home talking about his college plans with confidence that he could manage them. DO-IT has also helped my son get a part-time job during his first year of college...he has achieved a level of independence we never thought possible.”

Conclusion

Input from DO-IT scholars and parents suggests that Internet and computer access, summer study with college and career preparation activities, on-line peer and mentor support, and work-based learning have had a positive impact on postsecondary academic and career outcomes for people with disabilities. For suggestions on how to apply DO-IT strategies to other programs, review the shaded box, "Applications of Lessons Learned." Results of previous and current research suggest that such efforts will, ultimately, improve the postsecondary academic and career outcomes for people with disabilities.

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Resources

Consult the following Web pages to learn more about:

DO-IT Scholars Program

<http://www.washington.edu/doi/Programs/scholar.html>

DO-IT Snapshots: Bios of the DO-IT Scholars

<http://www.washington.edu/doi/Snapshots>

DO-IT

<http://www.washington.edu/doi>

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