

Technology and Postsecondary Education

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Introduction

Access to electronic and information technology has the potential to promote positive postsecondary academic and career outcomes for students with disabilities. However, the potential will not be realized unless stakeholders assure that all individuals with disabilities have access to technology that promotes positive academic career outcomes; learn to use technology in ways that contribute to positive outcomes and experience a seamless transition of availability of technology as they move through education and career environments. This paper explores the role technology can play in helping students with disabilities successfully transition to postsecondary studies and employment.

Access to Technology for people with Disabilities in Postsecondary Education

In recent years, there has been an increasing interest in programs and services for students with disabilities who are attending postsecondary institutions (Ganschow, Coyne, Parks, & Antonoff, 1999; Mangrum & Strichart, 1992; National Center for Education Statistics, 1999; Norlander, Shaw, & McGuire, 1990; Vogel & Adelman, 1993). In 1986, 29% of persons 16 years of age or older with a disability had enrolled in postsecondary education; by contrast, in 1994 it had risen to 45% (Office of Special Education and Rehabilitative Services, 1996; Thomas, 2000). In 1996, 6% to 9% of all undergraduate students reported having a disability (Henderson, 1998; National Center for Education Statistics, 1996), with a learning disability as the most prevalent (29%–35% of those reporting a disability). Vogel et al. (1998) found that the proportion of students with disabilities in postsecondary institutions ranged from .5% to almost 10%.

Students with disabilities, however, are still less likely than their non-disabled peers to attend college (Greenbaum, Graham, & Scales, 1995; Murray, Goldstein, Nourse, & Edgar, 2000; National Joint Committee on Learning Disabilities, 1994, 1999; Vogel & Adelman, 1993). Once students with disabilities have been admitted into college, they often need assistance to stay in school and to graduate (Blackorby & Wagner, 1996; Brinckerhoff, Shaw, & McGuire, 1993; Murray et al., 2000; National Center for Education Statistics, 1994a; Vogel & Adelman, 1993). The skills required for success at the postsecondary level are often those very skills with which students with disabilities have difficulty (Anderson-Inman, Knox-Quinn, & Szymanski, 1999). In addition, specific coping skills or strategies that appear to have been learned by students in high school often are not maintained over time (Gerber & Reiff, 1994).

Taking advantage of the power that technology offers in improving the postsecondary academic outcomes for individuals with disabilities is critically important because people with disabilities experience far less career success than their non-disabled peers (Benz, Doren, & Yovanoff, 1998; Butterworth, 1998; Gilson, 1996; McNeil, 1997, 2000; National Council on Disability, 2000; National Organization on Disability, 1998; Phelps & Hanley-Maxwell, 1997). However, these differences in achievement diminish for students with disabilities as they gain more education. Clearly technology access that leads to greater success in postsecondary education has the potential to improve career outcomes for people with disabilities.

Students with disabilities who pursue postsecondary academic and career options must have access to the high tech tools in order to compete with their non-disabled peers. These include computers, websites, telecommunications products, instructional software, and scientific equipment. Full access requires that built-in barriers to these tools and resources as well as facilities in which they are housed be removed and appropriate assistive technology be readily available (National Center for Education Statistics, 2000a, 2000b; Schmetzke, 2001; Waddell, 1999).

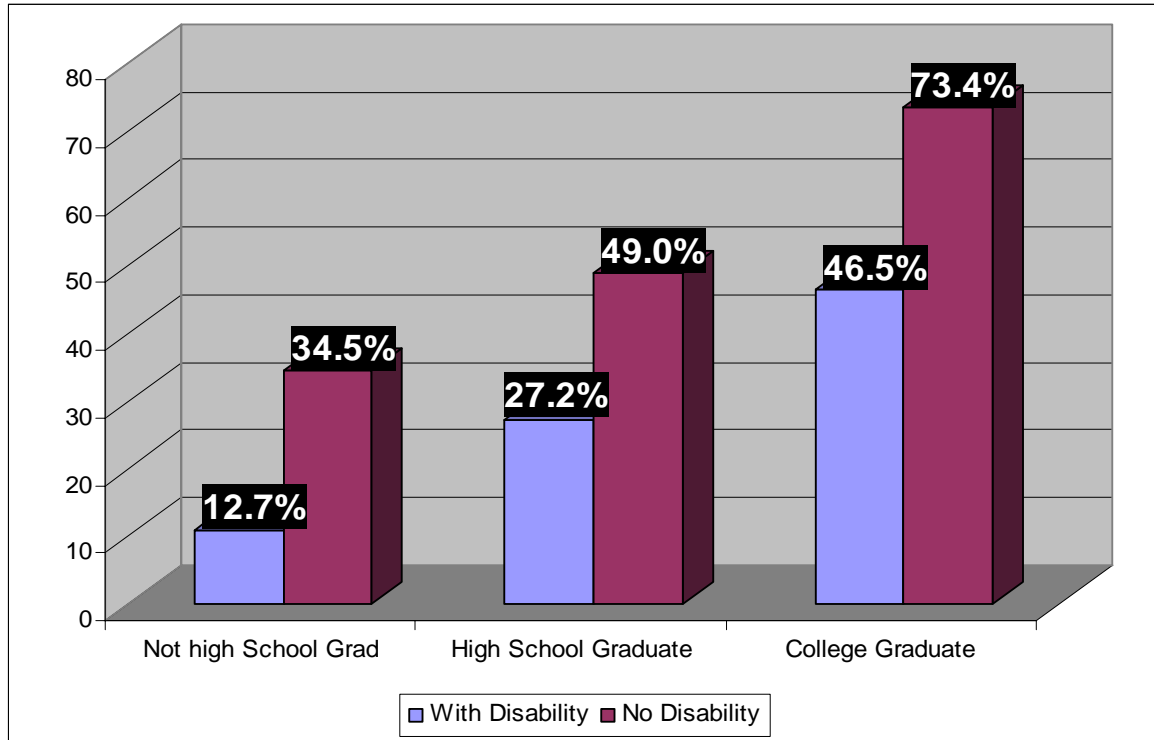
Today, the full potential of using technology to prepare young people with disabilities for postsecondary education is not being realized (National Council on Disability, 2000 & Social Security Administration, 2000). Funding is reported as the top barrier by providers and policy experts (National Council on Disability, 2000). Consumers identify the two leading barriers to be the lack of knowledge of stakeholders about appropriate assistive technology and lack of funding to purchase assistive technology (Fichten, Barile & Asuncion, 1999; National Council on Disability, 2000). Many graduates of teacher education programs are not adequately prepared in the general use of computer technology and in classroom applications (Anderson & Pelch-Hogan, 2001; Hasselbring & Glasser, 2000; National Center for Education Statistics, 2000a, 2000b; National Council on Disability, 2000).

In addition, as reported by the National Council on Disability (2000 p.25), “the rapid acquisition of educational technology has not sufficiently addressed the needs of students with disabilities. Access for students with disabilities is just beginning to be identified as an important factor when purchasing educational technology.” Inaccessible products, electronic resources, and educational software are developed and can be and are often purchased and housed in inaccessible facilities. Additionally, there are insufficiently trained personnel to use mainstream and specialized equipment who are equally unprepared in using these technologies so that the technologies can work together to maximize access to education for students with disabilities.

Other barriers to technology access for individuals with disabilities include lack of trained professionals to evaluate assistive technology, difficulties in locating assistive technology for testing by individuals with disabilities, confusion about existing laws and policies regarding assistive technology and accessible electronic and information technology, gaps in laws and policies that fund assistive technology, and the bureaucracy of public programs and insurance companies (National Council on Disability, 2000). In

particular, because of differences in laws and funding for technology between pre-college and college environments, even students who are lucky enough to gain access to empowering technology in pre-college settings, may not be allowed to take it with them when they exit high school. Therefore a break in service is created, providing a barrier to access to postsecondary education (Burgstahler, 2001).

Figure 1: Computer use by disability status and educational attainment



All of these issues hold implications for planning for the transition of individuals with disabilities to postsecondary education. The groundwork must be laid at the secondary level so that students are prepared to identify and use the assistive technology devices they need to succeed in postsecondary education. Due to the expense of assistive technology and the challenges institutions and individuals face in obtaining funding, the transition process must include an identification of funding sources for the assistive technology needed by the student in postsecondary education (Burgstahler, 2002). This identification should occur early enough to allow time for the appropriate device to be located and the student appropriately trained in its use.

Selection of the specific assistive technology approach should be based upon the assessment of the student's needs and the demands of the postsecondary education environment. This assessment must include the student. It also requires that the student and the secondary- and postsecondary-level professionals be aware of the demands of the student's targeted postsecondary education environment (Burgstahler, 1997). Students must be trained in the proper use of the assistive technology device to maximize their

educational gains and to decrease the existing high level of abandonment of assistive devices among students with disabilities. This training should be conducted before the student transitions to postsecondary education (Burgstahler, 1997). Professionals working with the student at the secondary level must carefully consider the impact of removing the student from eligibility for special education services—especially in terms of the services the student will need at the postsecondary level. Removal of this label may remove the eligibility of the student to receive reasonable accommodations—including assistive technology services and device at the postsecondary level (Scott, 1991).

These recommendations should be implemented while the student is still in high school, so that he or she is prepared for the transition to postsecondary education. They should also be enacted with the cooperation of the student and professionals at both the secondary and postsecondary levels (Burgstahler, 2002). The use of assistive technology has been identified in the IDEA Amendments as a critical component of the transition process. Assistive technology needs to be incorporated into the transition process if students with learning disabilities are going to make a successful move to postsecondary education—and graduate with the skills to attain a quality adult life.

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