

Empowering Students for the New Frontier:
College and Career Readiness

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DYNAMIC
LEARNING MAPS

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Abstract

Postsecondary college and career options for students with significant cognitive disabilities are in need of revision. More students need training beyond what is provided in secondary schools. Like others, students with significant cognitive disabilities need opportunities to attend postsecondary institutions. In order to do this, changes in how students are prepared for life after high school as well as the offerings provided through community college, vocational training programs, adult education programs, colleges, and universities must be revisited. A review of literature and history provides background for recommended changes. This review resulted in recommendations that are based on four assumptions: higher expectations must be the focus for all students; postsecondary opportunities must be available to all; instruction in academic and employability skills is necessary for all to take advantage of postsecondary opportunities; and accommodations and supports must be available to students with significant cognitive disabilities to enable them to take advantage of and succeed in postsecondary opportunities. The end goal is to provide students with the knowledge and skills to be economically independent and full participants in the citizenry of the nation.

Empowering Students for the New Frontier:

College and Career Readiness

Andrew Van Cleave, the son of two university graduates, wanted to go to college despite having significant cognitive disabilities (SCD). Recently Andrew became one of the first graduates of the **Next Steps Program, a two-year program at Vanderbilt University** designed for students with SCD. He started a job the month following graduation (Shah, 2011). Project Search provides similar opportunities for students with SCD. Lena graduated in the spring of 2010 and was offered a job at a dental clinic that serves patients with disabilities. Lena prepares and sterilizes instrument trays and cleans the exam rooms. Lena did not imagine she would have a regular job and get paid to do something she loves while working with people she enjoys (Project Search, 2012). Andrew and Lena are two examples of participants in a new frontier envisioned by advocates for students with SCD as part of an emerging national educational agenda for college and career readiness.

College and Career Readiness for Students with Significant Cognitive Disabilities

Over the last several years a collective mantra has emerged from business, education, legislators, and the U.S. Department of Education that students need to be better prepared for “college and career readiness.” Constituents emphasized that the United States is not competitive on an international level because schools are failing to provide students with adequate skills to meet the challenge of postsecondary education and the twenty-first century workplace. An outgrowth of this concern has been the development of the Common Core State Standards (CCSS) based on a set of college and career readiness expectations set forth by a consortium of states working in partnership with the Council of Chief State School Officers and the National Governors Association (Common Core State Standards Initiative, 2010). The impetus for the

work was based on the fact that students who entered community or four-year colleges needed significant remediation in entry-level coursework (Strong American Schools, 2008). As a result, a movement to raise standards to improve college and career readiness by adopting the CCSS across the country has ensued. Forty-five states plus the District of Columbia have adopted the standards; many hope that this change translates into improved college and career readiness and higher expectations among teachers, students, and parents. A group that has been an afterthought in this conversation is students with SCD. Inclusion of college and career readiness for students with SCD has provoked skepticism from many audiences. This skepticism is a direct result of the traditional view of the college experience. Reframing postsecondary education for students with SCD in light of the evolution of college programs that specifically address students with SCD is neither unrealistic nor impossible.

Researchers (Morningstar, Bassett, Cashman, Kochhar-Bryant, & Wehmeyer, 2012), noted that educational reforms are intended to prepare students with disabilities for full participation in the citizenry of our nation. The purpose of this paper is to examine college and career readiness for students with SCD. History and new research about postsecondary opportunities for this population is instructive in creating a set of assumptions that provide new opportunities and expectations for students with SCD in the twenty-first century. Encouraging students with SCD to participate in postsecondary education through college and career readiness is empowering students for a new frontier. This opportunity for students with SCD is grounded in a vision of high expectations, supports, quality instruction, and inclusion in postsecondary education.

College and Career Readiness

College and career readiness has received little attention in discussions about opportunities for students with SCD. The U.S. Department of Education's (2005) description of students with SCD is:

The [U.S.] Department [of Education] intended the term “significant cognitive disabilities” to include that small number of students who are (1) within one or more of the existing categories of disability under the IDEA [Individuals with Disabilities Education Act] (e.g., autism, multiple disabilities, traumatic brain injury, etc.); and (2) whose cognitive impairments may prevent them from attaining grade-level achievement standards, even with the very best instruction. (p. 23)

Throughout the United States, enrollment of all students with disabilities in postsecondary education increased between 1990 and 2005. In 1990 only 26% of students with disabilities had ever enrolled in postsecondary schools; by 2005, 46% had taken advantage of postsecondary education opportunities (Newman, Wagner, Cameto, Knokey, & Shaver, 2010). Of particular note, students with SCD pursuing postsecondary education opportunities increased from 8% of students with SCD in 1990 to 28% in 2005. Grigal, Hart, and Migliore (2011) reanalyzed the second National Longitudinal Transition Study (NLTS) and found that students with SCD were less likely to have a goal of postsecondary training or competitive employment; were more likely to have a sheltered and supported employment postsecondary goal; and therefore, were less likely to pursue postsecondary education or training and achieve work for pay. Transition plans for only 11% of students with SCD included a goal of attending a two- or four-year college, the best predictor of paid employment. Having a goal of postsecondary

education alone was a positive predictor for employment. This relationship demonstrates the inextricable link between postsecondary education and career readiness.

College Readiness Redefined

College readiness assumes that students have the skills and knowledge necessary to be accepted and succeed in postsecondary educational institutions, which includes four-year colleges and universities, two-year colleges, and trade/technical schools. Traditionally, college readiness is identified by a list of needed high school courses combined with a minimum score on a standardized test; however, college readiness can and should be much more.

In *Redefining College Readiness*, Conley (2011) described four sets of skills students needed to have to be college-ready: cognitive strategies, academic skills, academic behaviors, and contextual skills. Cognitive strategies are attributes and higher-order thinking skills allowing students to learn in a variety of subject areas, including intellectual openness, inquisitiveness, analysis, reasoning, interpretation, precision, and problem solving. Academic skills are the general and subject-specific knowledge students need to be successful in postsecondary education: writing, research, English, math, science, social science, foreign languages, and the arts. Academic behaviors are the attitudes and actions requiring student competency for college and include study skills, time management, and self-monitoring skills. Contextual skills are the college-specific abilities students need to succeed in postsecondary education such as understanding how to apply to college, managing financial aid, and adjusting to college life.

Conley's model (2011) of what all students need for college readiness can be applied to the needs of students with SCD. Students with SCD also have academic, content, behavioral, and contextual needs to succeed in postsecondary educational settings, and require additional structure and support to orchestrate their integration into the college system and practices.

Beyond these supports, **coordination and collaboration are required** to foster a successful transition. Transitioning from high school to postsecondary settings should be supported through the combined efforts of public agencies, the student, the family, and the postsecondary educational institution.

Career Readiness Redefined

The TASH Resolution on Integrated Employment (2009) stated:

Employment should be an expected outcome of the educational process for students with significant disabilities of both high school and college settings. Educational settings should provide information, supports and experiences to all students, including students with significant disabilities, on employment and the importance of a working life. (p. 3)

Career readiness ensures that students have the skills and competencies to get hired and to be retained in a meaningful job. Although **skills and competencies overlap with college readiness, career readiness is a separate skill set.** The Association for Career and Technical Education (ACTE) divides career readiness into three skill areas: **academic, employability, and technical** (ACTE, 2010). Students need to be fluent in math and literacy skills, and more importantly, need the ability to apply skills in real-world situations. Often students with SCD struggle in generalizing skills (Friend, 2011). **Teaching for generalization while on the job is an accommodation that can help ensure success for students with SCD.**

The workplace is a milieu of social nuances and activities. Employability skills are important for not only getting a job, but keeping it (Gurria, 2011; Wagner, 2008). For students with SCD to be successful, instruction in the social skills of employment must be directly taught, reinforced, and explicitly required in context. If not specifically taught, then the academic and

social behaviors of the workplace—punctuality, following directions, acceptance of re-direction, self-management, interacting with peers—can present challenges to students with SCD.

Some students will pursue more technical training to become career ready. There are currently 16 career clusters and 79 career pathways (ACTE, 2010). Career clusters are more general skills. Career pathways are specific job skills leading to certification or licensure. Students can pursue postsecondary training through the route of technical schools, community colleges, college programs, and community-based transition programs that lead to paid employment. After the transition program ends many students retain their paid jobs (Luecking, 2011). When hiring employees, businesses want to know what is in it for them. How will it help them make money, save money, and/or operate more efficiently (Luecking, 2011)? Luecking (2011) also reported that employers hire based on specific workforce needs; these included employees who were literate in reading and mathematics, trustworthy, and had social skills.

Supports to Postsecondary Transitions

Students with SCD represent the approximately 1% of students for whom, even with accommodations, standardized state assessments are inappropriate (U.S. Department of Education, 2003). Students with SCD represent 9% of all students with disabilities. As a result, students with SCD participate in alternate assessments based on alternate academic achievement standards (AA-AAAS) in order to measure and account for their educational progress. Kearns, Towles-Reeves, Kleinert, Kleinert, and Thomas (2011) found in a multistate study that:

. . . approximately 80% of students in the AA-AAAS were using symbolic oral speech or AAC [Augmentative and Alternative Communication] to communicate a variety of intents. An additional 10% to 12% communicated with emerging use of symbols by using pictures, objects, or gestures to express a variety of intents, whereas a smaller 8% to 10%

had no clear use of words, pictures, objects, or gestures to communicate expressively. Of this smaller group who had no clear use of pictures, objects, or signs, approximately 2% had inconsistent receptive responses, a necessary indicator of symbolic language and an obvious assessment requirement. (p. 4)

Communication support is one of the most common needs of this population for academic or employment success (Almond & Bechard, 2005). Improving the communication of students with SCD needs to be an instructional emphasis starting at the onset of a student's schooling. To facilitate communication skills, some students may require the use of Augmentative and Alternative Communication (AAC) devices. The International Society for Augmentative and Alternative Communication (2011) defines AAC as "the words used to describe extra ways of helping people who find it hard to communicate by speech or writing, AAC helps them to communicate more easily" (para. 1). AAC has many forms including signs, gestures, pictures, symbols, printed words, and voice output communication aides (VOCA: also referred to as speech-generating devices) that can be used to enhance student postsecondary outcomes (Mirenda & Iacono, 2009).

At the heart of the postsecondary opportunity discussion is a shift in the purpose of education for students with SCD and how educators, parents, and society perceive and adjust to what is possible for students. To ensure a successful future for students with SCD, higher expectations, postsecondary opportunities, instruction in academic and employability skills, academic access, accommodations, and supports for the entire range of possibilities must be in place. Implementation of new practices that reflect new expectations will ensure that all students are prepared to enter the workforce or postsecondary education.

Despite previously held expectations that academic skills cannot be taught to or learned by students with SCD, IDEA identified four outcomes for all students with disabilities: equal opportunity, full participation, independent living, and economic self-sufficiency. For students with SCD, IDEA provided a blueprint for preparing students for college and career. Advocates for students with SCD, parents, and disability oriented organizations have championed the need to follow the blueprint and set as a goal college and careers for all students. It is not enough to follow the letter of IDEA. The intent of the law is academic and social skill instruction that in the end provides the opportunity to live productive lives as contributing members of society.

The meaning of and possibilities for college and career readiness are poorly articulated for students with disabilities and largely directed only to students with mild to moderate disabilities. Reluctance to extend this discussion to include students with SCD may be due to the number of academic, behavioral, and social challenges students encounter that may prevent them from achieving the basic knowledge and skills considered “prepared” on a scale comparable to the general education peers. Obstacles, though real, do not preclude student participation in postsecondary opportunities or employment on a meaningful level.

Academic Potential

Students with SCD have historically been held to low expectations. By the time the Education for all Handicapped Children Act of 1975 (better known as PL 94-142) passed, students with SCD, if educated at all, were placed in separate or special schools, or in self-contained classrooms. The instruction was individually designed to meet the student needs, rather than address the students’ potential. Students were stacking blocks, matching pictures, and coloring well into secondary school (Westling & Fox, 2009). In the K-12 public school system, what is taught is driven by the standards and curriculum. Curriculum is made up of various

domains. While students in general education have historically focused on academic domains (reading, mathematics, science, and social studies), students with SCD have focused on a functional curriculum of daily living (self-care, home care, cooking, community, and work) (Browder, Spooner, & Meier, 2011). Academic expectations for students with SCD, if present at all, have been low (McGrew & Evans, 2004).

Typically, academic skills taught to students with SCD in the public schools included sight words and calculator math. Although functional skills are important for improving quality of life (Turnbull, Turnbull, Wehmeyer, & Park, 2003), a lack of academic skills excluded students from postsecondary education and often from meaningful employment. It was erroneously believed that students with SCD could not learn academics.

Literacy Skills of Students with SCD

Literacy can be defined beyond the narrow scope of reading skills (phonemic awareness, phonics, fluency, vocabulary, and comprehension) to incorporate a broader understanding of the differing ways that students learn and share information with others (Downing, 2005).

Previously, the focus both of literacy instruction and the majority of research has been on vocabulary through sight words and picture recognition (Browder, Wakeman, Spooner, Ahlgrim-Delzell, & Algozzine, 2006). In that review, too few studies—just three—investigated the instruction of phonics, although one had very positive results for phonics instruction. In a more recent study, Browder, Ahlgrim-Delzell, Flowers, and Baker (2010) evaluated an early literacy curriculum that included phonics and phonemic awareness compared to a sight-word approach. The results indicated that the **early literacy program had significantly higher effect size than the sight-word approach**. Many of the differences could be attributed to phonics instruction. Results

are consistent with the Browder, Ahlgrim-Delzell, Courtade, Gibbs, and Flowers (2008) findings that a multi-component approach that includes phonics is superior.

Although strong evidence shows that students with SCD can learn sight words, literacy is more than knowing “survival” words that are difficult to generalize into other settings. Rather, the emphasis should be on what Downing (2005) stated: “Students with significant disabilities certainly will not acquire literacy skills (and other academic skills) if we don’t expect them to or provide them with opportunities to do so” (p. 8).

Mathematics Skills of Students with SCD

Historically, mathematics instruction for students with SCD has focused on functional activities such as shopping, cooking, and computation with calculators. The general education curriculum for all students includes five domains: number and operations, measurement, data and probability, geometry, and algebra. Students with SCD have received focused instruction on the functional skill activities—numbers, operations with basic computations, telling time, and measurement with money—while missing the opportunity to learn other aspects of the mathematics curriculum (Browder, Spooner, Ahlgrim-Delzell, Harris, & Wakeman, 2008). Low academic expectations have resulted in a lack of access to broader mathematical skills that students with SCD may be capable of learning. In fact, research, although limited, already demonstrates that students with SCD are capable of learning other mathematical skills such as computation, measurement, graphing, shapes, and money (Browder et al., 2008). The lack of research on mathematics instruction in other areas of mathematics for this population precludes conclusions about students’ capabilities in learning mathematical content and skills.

The National Council of Teachers of Mathematics (NCTM) emphasized equity in the instruction of mathematics:

All students, regardless of their personal characteristics, backgrounds, or physical challenges must have opportunities—and support to learn—mathematics. Equity does not mean that every student should receive identical instruction; instead it demands that reasonable and appropriate accommodations be made as needed to promote access and attainment for all students. (2000, p.12)

Evidence demonstrates that if students with SCD are provided with academic opportunities paired with high expectations, learning can and will take place. Beginning with the earliest intervention, students should be expected to learn new academic skills that better prepare them for the future.

Current Opportunities

Previously held assumptions resulted in students with SCD returning home upon completion of high school. A few students garnered employment through a sheltered workshop or a service industry. Students with SCD are not underemployed or unemployed because they wanted to stay at home; rather, the concept of self-determination or the right to make decisions based on the needs, desires, and wishes of the student was neglected due to the limited opportunities provided to them (Bambara, Kroger, & Bartholomew, 2011; Friend, 2011). Often student's participation during Individualized Education Program (IEP) meetings—where decisions are made about the student—is minimal. Limited participation combined with the few postsecondary options discussed at IEP meetings, resulted in limitations on student choices.

The Individuals with Disabilities Education Act (IDEA) of 1990 (formerly known as the Education for All Handicapped Children Act) gave structure to the conversation surrounding postsecondary education and employment opportunities for students. Transition planning should begin earlier, but must be included in the IEP that is in effect when the student turns 16. Integral

to transition planning is the inclusion of the student in the decision making. Students are encouraged to participate and lead in determining future goals and plans for themselves (Friend, 2011; Test & Mazzotti, 2011; Westling & Fox, 2009). As stated in IDEA (2004) a variety of postsecondary opportunities need to be discussed, including “. . . postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education . . .”

All students critically need postsecondary opportunities. The greatest predictor of success in employment, independent living, and full inclusion in society is participation in a postsecondary program (Hollenbeck, 2011). Postsecondary opportunities provide students with choices and do not need to look the same for all students. Several postsecondary options are available to students with SCD, including apprenticeship programs, community college certification, job training programs, on-the-job training, vocational technical institutes, college and university programs and courses, and other forms of adult education (Grigal, Hart, & Paiewonsky, 2010; Test & Mazzotti, 2011).

More than 200 postsecondary schools operating in 37 states enroll students with intellectual disabilities (Hart, Grigal, & Weir, 2010). Postsecondary schools can vary dramatically, from a non-traditional, non-degree-seeking approach, to one which students receive a certificate upon completion. This is a dramatic increase over the last five years. In 2009, the Institute for Community Inclusion at the University of Massachusetts Boston, the coordinating center for Think College, conducted an online survey of postsecondary schools to identify opportunities for individuals with Intellectual Disabilities (ID) (Hart et al., 2010). Think College is a network of college programs designed to meet the unique needs of individuals with ID. Of the 149 schools responding, 50% were four-year colleges or universities, 40% were two-year

colleges, and the remaining 10% were trade and technical schools. Forty-five percent indicated that they served only adults, 26% indicated they served dually enrolling students in high school and postsecondary programs, and 29% served both adults and students. The survey identified stipulations and requirements of college life for students including the following:

- 56% of schools have special entrance requirements for students with intellectual disabilities.
- 71% do not require a college entrance exam for students with intellectual disabilities.
- 78% do not charge extra fees related to disability services.
- 75% offer classes and social opportunities targeted towards students with intellectual disabilities.
- 39% offer housing (Hart et al., 2010, pp.1-2).

Although the increasing number of postsecondary programs is encouraging, evaluation of program quality and effectiveness is needed. In an effort to ensure a quality program, the National Institute on Disability and Rehabilitation Research (NIDRR) funded research by the Institute for Community Inclusion at University of Massachusetts Boston and TransCen, Inc. to identify standards of expectation. Eight broad standards were identified: academic access, career development, social networks, fostering self-determination, integration with college systems and practices, coordination and collaboration, sustainability, and evaluation (Grigal, Hart, & Weir, 2010; Weir, Hart, & Grigal, 2010). These draft standards were recently finalized with slight modifications to the standards names: academic access, career development, campus membership, self-determination, alignment with college systems and practices, coordination and collaboration, sustainability and ongoing evaluation (Grigal, Hart, & Weir, 2011). Universities

and colleges that have existing programs or that are creating programs for students with SCD now have some guidance to provide students access and success in postsecondary education.

Employment should be one of the postsecondary options for students upon completion of high school. An example of an effective postsecondary transition program that takes students directly from high school to employment is Project Search. Project Search originated in a hospital 15 years ago as result of a high turnover rate of entry level workers who were in charge of stocking the shelves at Cincinnati Children's Hospital Medical Centers. In cooperation with several organizations the idea of using workers with disabilities was born and has grown to more than 150 locations in 39 states. The program is a High School Transition Program that consists of classroom instruction, career exploration, and unpaid on-the-job training. Students not only receive training in employability, but in independent living. As a result of the one year of intensive training and exploration, students are placed in complex and rewarding jobs (Project Search, 2012).

Another example of an effective postsecondary transition program that takes students directly from high school to work is Bridges from School to Work, a Marriott Foundation for People with Disabilities initiative. Luecking and Fabian (2000) described the program as consisting of three phases. The first phase is a pre-vocational phase in which students and parents are oriented to the program (two to three weeks). The second phase is the pre-vocational preparation consisting of career guidance, job preparation, and job search. The third phase is internship placement and support with specific skills training, and monitoring of the employee and the employer (two to four weeks). The employer pays the wages to the intern during the internship, but is under no obligation for continued employment once the internship concludes. Of the 84% who completed the internship, 75% were offered jobs with their host employer.

Luecking and Fabian (2000) concluded that a structured training program and paid work can contribute to a positive postsecondary transition to work.

In order to make postsecondary options available in the form of employment, students with SCD must demonstrate career readiness with the appropriate accommodations and modifications provided as needed. For example, students who have social or sensory sensitivity need potential employment barriers accommodated or the work environment modified. One form of sensory sensitivity is sensitivity to loud or sudden noises: a timer beeping, sounds of machinery, or music from a co-worker's computer could all distract a worker with a sensory sensitivity from assigned tasks. Simple accommodations include using headphones and soundproofing a workspace. Accommodations are essential to ensure worker safety and effectiveness.

As noted earlier, legislation has been passed in the last two decades that has supported and encouraged employment opportunities for students with disabilities. In addition to special education legislation, the Rehabilitation Act of 1973 was amended in 1992 to include the same definition of transition that was used in IDEA. In 1994, the School-to-Work Opportunities Act broadened the need for transition/career planning to include all students, whether a disability existed. Later, the Workforce Investment Act (1998) aligned the amendments of the Rehabilitation Act to all other employment initiatives and legislation. Finally, the Ticket to Work and Work Incentives Improvement Act (1999) allowed individuals to select an employment provider that would address career needs while protecting Social Security Disability benefits. This ensured the needs and desires of the individual were of primary concern, and the provision of employment opportunities and support would be based on individual needs. Students with SCD could expect the training and support they needed to pursue their employment aspirations.

Sheltered workshops are no longer the only postsecondary employment option for students with SCD.

Assumptions

To ensure college and career readiness is accessible for all students, including students with SCD, four assumptions should guide the future work, research, and planning for successful outcomes for students with SCD:

- *Higher expectations* must be the focus for all students including students with SCD.
- *Postsecondary opportunities* must be available to all.
- *Instruction in academic and employability skills* is necessary for all students to take advantage of postsecondary opportunities.
- *Access, accommodations, and supports* must be available to students with SCD to take advantage of and succeed in postsecondary opportunities.

Higher Expectations

In the past, the consensus among educators and the public was that students with SCD were unable to be active participants in society due to the severity of their disabilities and limited means of communication. Today, with the support of assistive technology, AAC devices, and other resource supports, students with SCD have demonstrated the ability to communicate and achieve goals that were once thought to be unattainable. Students who have realized success are the direct result of higher expectations (Giangreco, 2011; McGrew & Evans, 2004) paired with appropriate supports.

Expectation-setting occurs throughout the student's education and life. Parents are encouraged to support and demand rigor in the student's IEP and education. As the first and most committed advocate for a student with SCD, parents must take a long range vision of their

child's future and ensure that the necessary steps are in place along the way (Spooner, Browder, & Uphold, 2011; Zuna, Turnbull, & Turnbull, 2011).

The Pre-K–12 school system is an equal partner in pursuing high expectations for students with SCD. Teachers and service providers must see the potential in students rather than the disability. Jorgensen, McSheehan, and Sonnenmeier (2010) refer to this belief as the “least dangerous assumption.” **The least dangerous assumption is the one that is least harmful to the student, should the assumption be incorrect.** For example, if the school staff wrongly assumes the student cannot participate with same-aged peers, then the student misses the opportunity to grow and learn. The least dangerous assumption is to assume the student has or can be taught the competencies needed to participate in the general education classroom. If the school staff is incorrect in this assumption, then at least the student was given the educational opportunity, which can be adjusted to provide more appropriate instruction if necessary. The presumption of competence carries less potential harm for students than the opposite assumption (Jorgensen et al., 2010).

Postsecondary Opportunities

The importance of college and career readiness is addressed by the four outcomes of IDEA for students with disabilities: equal opportunity, full participation, independent living, and economic self-sufficiency. College and career readiness is not an option, but a key tenet of the educational program under IDEA to be considered by the IEP team. The IEP team, comprised of representative(s) of the school, postsecondary service providers, parents, and the student, is charged with developing a plan to ensure that the student acquires the knowledge and skills for independent living and economic self-sufficiency. Presently, few students with SCD are prepared to access postsecondary opportunities after high school (Newman, Wagner, Cameto, & Knokey,

2009). A limited number of programs have the supports, funding, understanding, and flexibility to serve students with SCD. Ensuring that students with SCD are able to make a successful postsecondary transition may require extra time to prepare, gather, and implement supports and coordinate services.

IDEA requires the development of a transition plan for students with disabilities by the age of 16, based on the students' interests, strengths, needs, etc. This student-centered planning approach places the student's wishes at the center of transition planning (Childre & Chambers, 2005). Student self-determination as defined by the University of Illinois-Chicago's (UIC) National Research and Training Center on Psychiatric Disability (2002) includes freedom of choice, independence, personal agency, self-direction, and individual responsibility. Wehmeyer (2005) further clarified self-determination by stating that "self-determination behavior refers to volitional acts that enable one to act as the primary causal agent in one's life and to maintain or improve one's quality of life" (p. 117). Encouraging self-determination through the transition process has been demonstrated to positively impact the transition from school to adulthood and post-secondary outcomes (Test & Mazzotti, 2011; Zager, Brown, Stenhjem, & Maloney, 1998).

Instruction in Academic and Employability Skills

College and career readiness has many dimensions for students with SCD. The adoption of the new Common Core State Standards has increased the academic rigor for all students, including students with disabilities. With the bar set higher, it is imperative that students with SCD are provided with high-quality instruction in academic areas and in the areas of functional academics needed for transition to adulthood. Additionally, students with SCD need instruction on employability skills, which are skills that ensure students can acquire and retain a job. The Partnership for 21st Century Skills (2009) stated that students must master skills that combine

content knowledge, specific skills, expertise, and literacy. In addition to core academic content knowledge, students must also demonstrate skills in critical thinking, problem solving, collaboration, and communication. Students with SCD may require targeted, specific instruction in the employability skills, in the same way they are instructed in academic areas. To further clarify the employment needs of students with disabilities, the Texas Council for Developmental Disabilities (2009) clarified its position:

- Students with disabilities should receive a sound foundation in their public school education from which to transition to postsecondary education and/or a career path after graduation. This foundation must include futures planning. Secondary education must provide a range of choices in career preparation such as vocational skills, career and technology education, preparation for postsecondary education and opportunities for employment in the community.
- People with disabilities have the right to self-determination and choice in establishing their career path, career goals, job placement or self-employment options, retention, advancement and retirement plans.
- People with disabilities should have access to an array of individualized, flexible and coordinated support services including assistive technology and natural supports, as long as necessary to obtain and keep employment.
- The employment needs of people with disabilities should be effectively addressed by a collaborative effort between businesses, professional organizations, and state and local governments.
- All entities involved in statewide employment initiatives should disseminate information about civil rights laws that protect people with disabilities, about resources to support

people with disabilities in the workplace, and about the tangible benefits that accompany employment of people with disabilities in the workforce.

- Entities involved in statewide employment initiatives should assist people with disabilities to develop successful self-employment options that can include micro-enterprises and other entrepreneurial ventures. (Employment Position Statement, para. 2)

In order to engage in postsecondary opportunities both in college and/or employment, students with SCD need a blend of academic and employment-ready skills.

Disability advocacy organization TASH (2006) stated that opportunities should be available to all students in preparation for postsecondary experience and should include but not be limited to “pursuing knowledge, investigating career goals, acquiring maturity through new experiences, gaining responsibilities and ways of problem-solving and exploring aspects of life by engaging in new personal and professional relationships, and learning collectively with each other” (p. 2). In TASH’s view, these expectations apply equally to students with SCD. What this means for postsecondary readiness of students with SCD requires some adaptation of Conley’s (2011) dimensions based on Grigal et al. (2011). Merging Conley’s (2011) recommendations for the components of college readiness—key cognitive strategies, academic knowledge and skills, academic behaviors, and contextual skills and awareness—with Grigal et al.’s (2011) requirements for postsecondary programs for students with SCD—academic access, career development, campus membership, self-determination, alignment with college systems and practices, coordination and collaboration, sustainability, and ongoing evaluation—results in a graphic that might look like Figure 1. Based on the work of Grigal et al. (2011) to frame the standards, quality indicators, and benchmarks for the development of postsecondary programs

for students with intellectual disabilities, one can extrapolate Conley's readiness skills to be the focus of postsecondary readiness for students with SCD.

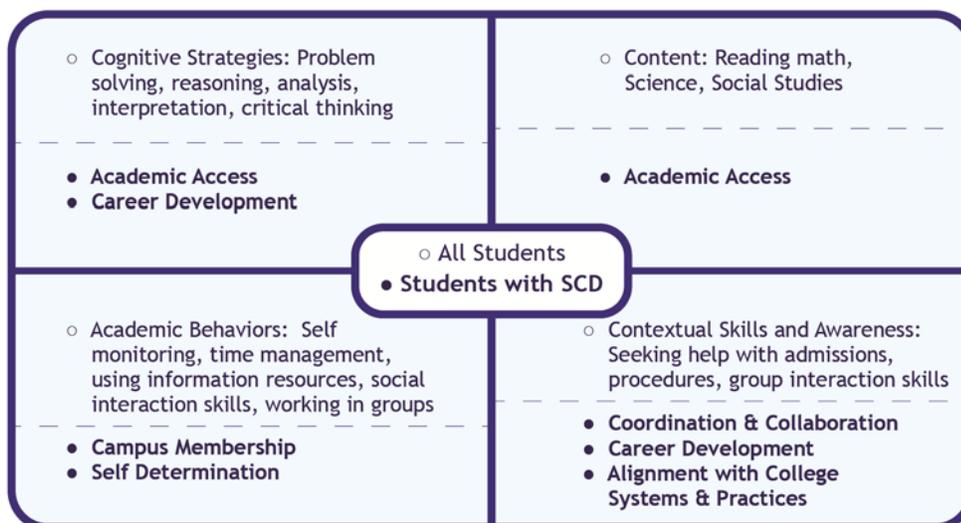


Figure 1. Comparing College Readiness for General Education Students to Students with Intellectual Disabilities. Adapted from “Preparing all students for life, work, and citizenship: The next generation of alternate assessments,” by R. Quenemon and A. Sheinker, July 2011, presentation at the OSEP Project Directors’ Conference, Washington, DC.

Academic access for students with SCD calls for a redefinition of academic programs in K-12 that prepares students for opportunities. Based on recent research, opportunities to learn basic academic skills are necessary for students to be prepared to take advantage of this new access to postsecondary learning. Instruction in communication skills and frequent practice with academic and employability skills in real-world settings will encourage and enhance successful student outcomes. Postsecondary institutions need to be prepared to provide students with SCD opportunities to audit, enroll, or participate in college, noncredit-bearing, and continuing education courses. Provisions of accommodations, technology supports, educational coaches, peer mentors, and tutors should be available to increase access to academic learning. Students with SCD need assistance in accessing adult learning opportunities and funding. While problem solving and critical thinking are likely to look very different when performed by students with

SCD, some basic ability to deal with more than one alternative or unanticipated option is vital for students with SCD. As discussed earlier, postsecondary institutions need to expand the ways in which students are supported and accommodated in postsecondary settings to help them continue to access academic learning including content and strategies.

Campus membership is important to all students. Participation in social organizations and recreational activities and use of technology for communicating with peers and teachers are important parts of postsecondary life experiences and important preparation for the world of work. Social networks are vital to success in employment settings. Postsecondary institutions may create opportunities for students with SCD to participate in social networks intended to foster growth in this area, but preparation to take advantage of opportunities must start in the K-12 setting. Learning and practicing them begins for many students in an academic setting. Engaging with peers in campus organizations is part of social learning and important to job success. Support for student participation in social activities and their use of social communication technology is a vital part of postsecondary learning.

Self-determination is students' ability to advocate for themselves and perform problem solving and decision making. It includes students knowing their disability and advocating for supports and accommodations, e.g., asking for help when needed (Grigal & Hart, 2010). Additionally, problem solving is critical to decision making, which is a critical underpinning of self-determination (Wehmeyer, 2005). Students' lack of participation in the IEPs that will set the course of their future provide clear evidence that teachers, parents, and administrators have yet to fully grasp the importance of teaching and expecting self-determination behaviors of students. Researchers have found that the skills associated with self-determination must be directly taught, practiced, and explicitly required of students with SCD (Spooner, Browder, & Uphold, 2011;

Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup, 2010). Wehmeyer et al. (2010) and Shogren et al. (2011) concluded that self-determination behaviors are linked to more positive adult and postsecondary outcomes for SCD students. In a follow-up study, Wehmeyer et al. (2012) demonstrated that students with SCD successfully acquired skills using the Self-Determined Model of Instruction (SDLMI). This aspect of teaching and learning should be part of postsecondary programs for students with SCD. Students' continued participation in their educational program planning, accommodation and technology determinations, and goal setting and review should be a part of ongoing program activities.

Career development may require incorporating unique features in postsecondary settings. The kinds of accommodations and supports that students will require in the workplace may be needed for them to acquire employability skills in the postsecondary setting. Postsecondary institutions need to provide assistance for planning toward career goals. Job-coaching, paid and unpaid supervised internships or work-based training, and community work experiences are critical to the students' ongoing career development and should be a part of their postsecondary training toward full and sustainable employment (Luecking & Fabian, 2000).

Alignment of postsecondary programs with college systems and practices for students with ID require that program outcomes are clear and publicly available, person-centered academic advising and planning are provided, college campus resources are accessible, universal design principles are evident in course instruction, and full integration of students with SCD in policies, procedures, and program planning are evident (Grigal et al., 2011). Postsecondary readiness skills for students with SCD require not only a restructuring of expectations and services for students in K-12 settings, but also coordination and collaboration between K-12 and postsecondary programs that will receive the students with SCD. In some states, this

collaboration and coordination has also meant increased efforts to make seamless the relationships among programs and vocational rehabilitation services, which are traditionally charged with the placement of students after high school. In other cases, Think College programs have replaced or filled the gap created when a lack of funding or political support prevented vocational rehabilitation programs from providing postsecondary placement of students with SCD (Test & Mazzotti, 2011; Izzo, 2010). Where they exist and are charged with placement of students, vocational rehabilitation programs should be an integral part of this conversation.

Grigal et al. (2011) identified two other postsecondary standards for programs that serve students with SCD—sustainability and ongoing evaluation—and that address concerns for program design. Although topics do not parallel Conley’s model, they are vital to the design of fledgling programs in order to address the unique needs of this population of students.

Access, Accommodations, and Supports

Access to postsecondary opportunities is merely the starting place for students with SCD. The accommodations and supports needed to ensure success in a post-secondary setting is essential. Postsecondary opportunities should not be considered a “one-size-fits-all” program; rather, the postsecondary opportunities will look different for different students. Each student with SCD might have a unique plan. The plan for a student with SCD might include postsecondary opportunities, such as the following:

- credit and non-credit courses or continuing education;
- community college or vocational technical institutes;
- two- or four-year college participation;
- adult basic education programs;
- local community programs;

- workshops provided through retail stores;
- personal development courses;
- on-the-job training;
- apprenticeship programs; and
- community college certification programs (Grigal, Hart, & Paiewonsky, 2010, p. 4).

Postsecondary outcomes mean more than earning a college degree. They enable students to determine their future for themselves.

In order for any postsecondary option to be viable, individual student's needs must be accommodated and supported. Extensive literature addresses the need for job coaches, sensory accommodations, and other supports in the postsecondary setting. Emphasis should be on the individual student's needs and how to address them within the student's chosen postsecondary path (Test & Mazzotti, 2011; Zager et al., 1998).

Emerging Access

Federal funding is available from the Higher Education Opportunity Act of 2008 (HEOA) for programs providing opportunities for students with SCD. In order to obtain HEOA funding, programs must meet certain requirements: students' physical attendance; academic, career, and independent living instruction; preparation for gainful employment; advising and structured curriculum; and opportunities for students with SCD to participate in coursework and other activities with students without disabilities. Students who participate in these programs become eligible for Federal Pell Grants, Federal Supplemental Education Opportunity Grants, and the Federal Work-Study Program. In addition, the HEOA authorized model comprehensive transition and post-secondary education programs to support the needs of students with ID.

The Institute for Community Inclusion at the University of Massachusetts Boston (the

coordinating center for Think College) has made significant strides in meeting the challenge of creating postsecondary model programs with accommodations and supports for students with SCD (Hart & Grigal, 2010). Model programs are growing in number and size throughout the country, but are still unavailable to many. Students can enter Think College in traditional and non-traditional ways. The traditional path requires placement tests and is the pursuit of a degree. The non-traditional path focuses on employment goals through person-centered planning and may not involve a degree, but can lead to certification or the garnering of credit. Students attend to gain both academic and social skills. Students may audit classes or even repeat them as many times as necessary. Students are served in several different models throughout the country. These models are mixed/hybrid, inclusive, and separate. However, research is too limited at this time to identify the most effective models, but the more inclusive the program, the better it is for students (Hart & Grigal, 2010). Expansion of programs hold promise for providing access to postsecondary opportunities not previously imagined for students with SCD. Research into program effectiveness will be important to expand opportunities for success for students with SCD.

Conclusion

Students with SCD have historically been subjected to perceptions that are proving to be inaccurate. Rather than “presume competence” (Jorgensen et al., 2010), the capabilities of students with SCD have been viewed from a deficit model. This belief has limited and restricted postsecondary opportunities for students. Students with SCD can learn academics, if taught them. Students with SCD can attend college, trade school, etc., if provided with the necessary supports. More can be done and more research is needed to prepare students with SCD for postsecondary opportunities.

To ensure a successful future for students with SCD, higher expectations, instruction in academic and employability skills, academic access, and accommodations and supports must be in place in both K-12 and postsecondary programs. Results of recent studies indicate that students with SCD may be capable of acquiring more academic skills than previously thought. This reimagining of the potential of students with SCD could lead to more and better opportunities for postsecondary education and sustainable paid employment. Apprenticeship programs, community college certification, job training programs, on-the-job training, vocational technical institutes, college and university programs and courses, and other forms of adult education may be options for students with SCD (Grigal, Hart, & Paiewonsky, 2010; Test & Mazzotti, 2011).

More than 200 postsecondary schools operating in 37 states enroll students with ID (Hart et al., 2010). The HEOA provides funding through Federal Pell Grants, Federal Supplemental Education Opportunity Grants, and Federal Work-Study programs to students attending postsecondary schools that enroll students with intellectual disabilities. Eight broad standards have been identified for ensuring that programs are prepared to meet the needs of students with SCD: academic access, career development, campus membership, self-determination, alignment with college systems and practices, coordination and collaboration, sustainability, and ongoing evaluation (Grigal et al., 2011).

Access to postsecondary opportunities might include participation in credit and non-credit courses or continuing education at community colleges, vocational technical institutes, two- or four-year colleges, adult basic education and local community programs, and personal development courses. Workshops provided through retail stores, on-the-job training, and apprenticeship programs hold promise for some students with SCD. With adequate academic and

career readiness training, students with SCD can maximize their skills and prepare for opportunities. The result of academic and career readiness training should be the opportunity to live productive lives as contributing members of society. Emphasizing college and career readiness for students with SCD marks a dramatic shift in special education policy and practice. These changes have implications for both research and practice based on these four assumptions that will challenge K-12 schools, institutes of higher education, career and technical education, parents, and students well into the future.

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