



Literacy, Employment and Youth with Learning Disabilities:

Aligning Workforce
Development Policies and Programs

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Table of Contents

Executive Summary	1
The Critical Impact of Literacy Skills on Business and Workers	1
Definitions and Mandates	2
Youth With Learning Disabilities: The Challenges	3
Workforce Development Systems and Professionals	5
The Educational System	6
The Workforce Investment Act System, including Vocational Rehabilitation.	7
The Juvenile Justice System	9
Meeting the Needs of Youth with LD in Workplace Programs	10
Professional Development Collaboratives.	10
Professional Development to Reinforce Literacy Learning.	10
The Role of Technology to Support Youth With LD	13
Self-Determination With a Focus on Youth Empowerment.	15
Examples and Models	16
Implications.	21
References	24

Executive Summary

The purpose of this paper is threefold: (1) to provide information to policymakers and government personnel who support and develop workforce development programming, policies and practices for youth, including those with learning disabilities (LD); (2) to provide a national view of the literacy and employment status of youth with LD who have low literacy skills; and (3) to provide information on how workforce development programs can meet their literacy, employment and self-determination needs, providing professional development and leveraging technology to do so more effectively and efficiently.

To accomplish this purpose, the paper is organized to address six objectives:

1. Describe the critical need for sophisticated literacy skills in the 21st-century workforce
2. Define learning disabilities and discuss the implications of the need for higher literacy skills for youth with LD
3. Discuss the challenges in the current workforce development systems and personnel and professional development needs to address the achievement of youth with LD
4. Provide information on how these workforce development programs and personnel can meet the literacy, employment and self-determination needs of youth with LD
5. Offer examples of program models
6. Discuss implications for policymakers and government personnel who support and develop workforce development programming, policies and practices for youth.

The Critical Impact of Literacy Skills on Business and Workers

Many employers are starting to pay more attention to the potential impact of employee literacy on their business success, recognizing that one of the principal threats to their productivity is lack of education and the need for continued training of their workers. Poor literacy skills have an economic cost to individuals, the companies that hire them and the nation (Peterson, Ott, & Wilson, 2002); therefore, employers that attempt to improve their employees' literacy skills are likely to enjoy financial and bottom-line benefits, including improved productivity and income, cost savings, reduced error rates, improved health and safety, improved communications, and increased customer and employee retention (Bloom, Campbell, & Gagnon, 2001; Conference Board of Canada, 2003).

Literacy in the workplace is particularly important because workforce projections universally indicate a growing need for more highly skilled workers. Many industries have made changes that reflect an increase in workplace skill requirements as well as on-the-job learning to adapt to an ever-changing workplace. Much of this independent learning is best accomplished through reading, either on or off the job site. In addition, according to the American Management Association (www.amanet.org), reading and math requirements for today's workplaces are rising quickly, leaving even employed workers unprepared and continually in need of new skills to remain competitive.

New kinds of workplace literacy are developing, including computer, technical, digital literacies and collaborative, problem-solving work habits, each vital for effectively working in today's businesses (Center for Workforce Performance, n.d.; Jurmo, 2004). Workers are much more likely than before to face new literacy demands as part of ongoing workplace retraining. Jobs require the ability to read more often as well as to read more difficult and complex materials. Many companies are pressed to hire people whose literacy skills meet the demands of their positions; these employees will, over time, become less able to do their jobs well and will be ill prepared for the ongoing education they are likely to need to keep their jobs.

The development of an employee's workplace literacy skills yields long-term rewards for the individual as well as to the employer. Workers who improve their literacy skills earn higher pay, receive more promotions and enjoy increased job security. They also benefit from improved self-confidence and self-esteem, lower levels of unemployment, and better job and further training opportunities. Improved literacy makes employees less vulnerable to lay-off and displacement and, for those who are unemployed, better equipped to find new jobs (Bloom et al., 2001; Conference Board of Canada, 2003). Employees with increased literacy skills also tend to develop leadership skills, can their employers solve problems as part of a team, have greater capacity to use new technologies and are more productive on a day-to-day basis (Bloom & Lafleur, n.d.).

Millions of youth lack the literacy skills they need to succeed in the workplace. The trajectory of achievement in secondary schools for struggling or reluctant students or English language learners (ELLs) points to literacy as a critically important area of growing need (Alliance for Excellent Education, 2009). So long as youth leave high school unprepared, it will be important to increase the number and quality of postschool programs that focus on youth who have not completed high school, are disengaged from schools and services, or exhibit significant gaps in literacy and achievement skills. Hence, workforce development programs must join other youth-serving entities as part of a national agenda to boost literacy skills and competencies in the preparation of a competitive 21st-century workforce.

Meeting the workforce needs of employers and the workforce training needs of youth are challenges that require coordinated efforts among a number of community stakeholders: business and industry; workforce development policymakers and professionals; educational institutions and professionals; faith-based and community-based agencies and programs that include employment, social services and disability agencies; non-traditional entities such as libraries and labor unions; and the workers themselves.

Definitions and Mandates

According to the National Literacy Act of 1991 and the Workforce Investment Act of 1998 (Section 203, Definitions), literacy is "the ability to read, write, speak in English, compute, and solve problems at levels of proficiency necessary to function on the job, in the family of the individual, and in society, to achieve goals, and to develop knowledge and potential."

Across federal programs and legislation, "youth" are defined in a variety of ways based on eligibility criteria. For the purposes of this paper, youth are defined as individuals ages 16 to 24. This age range represents the range used by many researchers (Fernandes, 2007; Sum, 2002) examining youth-related labor issues.

Programs serving youth in the range of 16–24 years old cross several legislative jurisdictions that apply to individuals with diagnosed disabilities. For example, in pre-K–12 and dual-enrollment programs, programs may serve youth up to age 21 under the Individuals with Disabilities Education Improvement Act (IDEA) reauthorized in 2007. IDEA defines a specific learning disability as:

...a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia...

However, learning disabilities do not include "... learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage" (34 CFR §300.7[c][10]).

Programs serving youth outside of the pre-K–12 education system may be guided by the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 and Americans with Disabilities Act Amendments of 2008. Each of these has slightly different definitions of learning disabilities and disabilities overall.

The Rehabilitation Act focuses on functional capacities or skills and implications as they relate to the employment and social adjustment of people with disabilities. The Rehabilitation Act considers a person with a specific learning disability to qualify as an individual with a significant disability if he or she is:

...an individual who has a severe physical or mental impairment which seriously limits one or more functional capacities (such as mobility, communication, self-care, self-direction, interpersonal skills, work tolerance, or work skills) in terms of an employment outcome; whose vocational rehabilitation can be expected to require multiple vocational rehabilitation services over an extended period of time; and who has one or more physical or mental disabilities or combination of disabilities...to cause comparable substantial functional limitation (Rehabilitation Act, Section 7).

The Americans with Disabilities Act of 1990 prohibits discrimination of people with a physical or mental impairment that heavily restricts one or more major life activities. Because learning is considered a major life activity, individuals with LD are covered by this law. The ADA, amended in 2008 and in effect as of January 1, 2009, expanded the list of “major life activities” to include reading, thinking and concentrating. As a result, it will be important for advocates of youth and adults with LD to study the resulting U.S. Equal Employment Opportunity Commission (www.eeoc.gov) regulations for these amendments to determine what they will mean for access to reasonable accommodations and protection from discrimination, including in the workplace.

Learning disabilities comprise the largest category of specific disability. Learning disabilities affect about 1.8 percent of the population, or 4.67 million people, according to the 2005 U.S. Survey of Income and Program Participation (SIPP) (cited in Cortiella, 2009). LD is an invisible, or “hidden,” disability, not readily apparent to employers and co-workers. The reality is that many youth in workforce development programs and employment settings may have disabilities that have not been

accommodated owing to lack of proper diagnoses in school, lack of acceptance of their disability and/or lack of disability disclosure to employers for either of these reasons.

Youth With Learning Disabilities: The Challenges

Youth with LD face multiple challenges that complicate their training and learning trajectories. This section provides an overview of how learning disabilities impact employment and literacy development for youth.

Characteristics

Learning disabilities are a group of disorders that can impact many areas of learning, including reading, reading comprehension, writing, spelling, math, listening, oral expression, information processing and organization, with reading difficulties being the most common (Cortiella, 2009; Taymans, Swanson, Schwarz, Gregg, Hock, & Gerber, 2009). Youth with LD demonstrate different types and degrees of difficulties and strengths (Cummings, Maddux, & Casey, 2000; Hitchings & Retish, 2000). Learning disabilities are lifelong; they are not outgrown and often impact individuals in the workplace. It is important to note that many youth with LD lack a clear understanding of their disability and its potential impact on their ability to perform a job (Hitchings & Retish, 2000). As a result, many make poor career choices.

Employment Challenges

Being an employee is just one valued adult role, but it is a significant indicator of adult success and autonomy in the United States (Fernandes & Gabe, 2009; Taymans et al., 2009). Working is how people contribute to their communities and to the economy. The National Longitudinal Transition Study 2 (NLTS-2) (2003) findings indicate between 57 and 69 percent of youth with LD have the goal to attain competitive employment in their individualized education program (IEP), and 43 percent would like to attend a vocational training program. While they value and strive for employment success, youth with LD often experience difficulties and require interventions in the workplace (Rehabilitation Services Administration [RSA], 2005). The NLTS-2

found that only 46 percent of youth with LD actually had regular paid employment within two years of leaving high school (Cameto, Marder, Wagner, & Cardoso, 2003). Studies by Kaye (2005) and Reder (1995) suggest that youth with LD experience high rates of unemployment and underemployment, fewer work hours, lower wages and lower annual incomes as adults than their nondisabled peers.

According to the National Center for Learning Disabilities (NCLD), there are five common reasons why youth with LD experience challenges at work:

1. Efficiency: Slow pace of work, difficulties with organization
2. Accuracy: High error rate associated with reading tasks and/or written correspondence
3. Sequencing of tasks: Problems following instructions or completing projects with multiple steps
4. Time management: Trouble with planning, being on time or meeting deadlines
5. Social skills: Problems with meeting new people, with professional interactions and with discussing the impact of LD on tasks to be completed

These are some of the predominant issues that limit the success of workers with LD, many of whom also struggle with “soft” skills and self-determination or empowerment skills (Pryce, Gerber, & Mulligan, 2003). Below, we explore how these essential skills matter for youth with LD.

Soft Skills. According to the 2006 report “Are They Really Ready to Work?” (Casner-Lotto & Barrington, 2006), while the “three R’s” (reading, writing and arithmetic) are still fundamental to every employee’s ability to do the job, employers view “soft” skills as even more important to work readiness. Youth frequently lack these skills, which include collaboration skills, critical thinking, problem solving, and oral and written communication skills. This report supports the previous findings of Gerber (1998) and Gerber and Brown (1997) that

unemployment and underemployment for individuals with LD is often tied to their deficits in social competency. According to Gerber (n.d.), social skills are an important underpinning for success in any employment setting. What youth “need to know” has been gathered from employers and industry into the Secretary’s Commission on Achieving Necessary Skills (SCANS) report (June 1991 and updated report 2000) from the U.S. Department of Labor and widely circulated among education and workforce programs. These nonacademic limitations may have a greater adverse impact on achieving and maintaining employment than those associated with poor academic performance.

Self-Determination. The employment cycle characteristic of youth with LD is in part due to a lack of a focus on self-determination and empowerment by teachers, transition specialists, workplace programs and the youth themselves. Most youth and adults with LD do not receive needed accommodations on the job because they have chosen not to disclose their disability to their employer, reflecting a lack of self-awareness, self-determination and self-advocacy. Self-disclosure to employers by working youth occurs only approximately 4 percent of the time (Wagner, Newman, Cameto, Garza, & Levine, 2005). Many more youth do not accept that they have a learning disability or understand how it may impact their workplace performance, and therefore do not disclose their disability or request accommodations, leading to an unproductive working situation (NLTS-2, 2003).

Literacy Challenges

Employment challenges for youth with LD are compounded by literacy needs. Many youth with LD have low literacy skills, especially in reading. The NLTS-2 found that reading achievement for youth with LD at the secondary school level is on average 3.4 years behind their enrolled grade level. Youth with LD, including those with undiagnosed LD, also often lack access to and training on explicit strategies for the use of assistive technology or adaptive equipment to access courses and reading

materials to improve their literacy skills (Gregg, in press). Many such youth, therefore, enter workforce development programs and the workplace without the literacy skills, knowledge, supports and habits necessary for employment success. However, with appropriate supports and training, youth with LD can achieve and excel in the workplace (Izzo & Lamb, 2003).

In the past decade, adolescent literacy has emerged as a unique discipline with specific concerns and practices (Kamil, Borman, Dole, Kral, Salinger, & Torgesen, 2008; Moore, Bean, Birdyshaw, & Rycik, 1999; National Institute for Literacy, 2007; National Joint Committee on Learning Disabilities, 2008; Short & Fitzsimmons, 2006; Torgesen et al., 2007). The topic has attracted the attention of educators, service providers, researchers and policymakers alike as a key to ensuring that youth have the skills and knowledge to succeed in postsecondary education and the workplace. What works and best approaches for reading and content area instruction for secondary youth have been evaluated and documented in the national reports cited above; applying this knowledge within workforce development programs will require strategic partnerships and awareness building.

Programs that contextualize basic skills and strategies report greater persistence and completion rates for participants than do sequentially offered programs in which literacy skills are taught prior to work-related training (Chisman, 2009). Contextualization is important for youth with LD, who benefit from strong and explicit connections: "Situating literacy instruction in specific disciplines can facilitate students' development of competence in reading content-area texts and writing to communicate ideas associated with a content area" (National Joint Committee on Learning Disabilities, 2008, p. 13). This is particularly true for youth who are disengaged and struggle with motivation or who have experienced school failure.

To support literacy development, youth with LD who have extremely low basic literacy skills need multi-sensory, explicit, systematic, phonics-based instruction to enable them to learn to read and write proficiently (National Joint Committee on Learning Disabilities, 2008). Small-group or one-on-one intense instruction may be required for youth who have not received

LD-specific services through their school and who have extremely low literacy skills. This intensive and specific instruction is best delivered by trained literacy professionals. Partnerships with and referrals to qualified literacy providers—such as local literacy providers in federally funded and community-based adult basic education, alternative public or charter high schools; career and technical or vocational schools; community college programs; and specialized schools for the learning disabled—may offer youth with literacy needs the trained staff, intensity and explicitness of instruction they require. Partnerships and dual enrollment agreements may allow youth with LD to receive literacy, soft skills, self-determination and workplace instruction simultaneously, thus meeting their need for contextualization (Eidman-Aadahl, 2002; Hull & Schultz, 2002).

Workforce Development Systems and Professionals

The American system of workforce development is large and complex, comprising thousands of organizations and their staff delivering services to youth, adults and employers. The National Collaborative on Workforce and Disability for Youth (NCWD-Y) defined the workforce development system as:

All national, state, and local level organizations that plan and allocate resources (both public and private), provide administrative oversight, and operate programs in order to assist individuals and employers in obtaining education, training, job placement, and job recruitment (McCain, Gill, Wills, & Larson, 2004, p. 2).

Within this extensive workforce development system is a large subset of organizations and professionals working strictly with youth to build work skills and to help them find jobs. A yet smaller subset is composed of the organizations and professionals designated to work with youth with disabilities. Youth with disabilities generally receive their workplace preparation and training, work experiences and related educational opportunities within one or more of three systems: (1) the educational system; (2) the Workforce Investment Act (WIA) workforce

development system (including vocational rehabilitation) or (3) the juvenile justice system. Youth with LD represent only a portion of the population served by these systems; the training and educational opportunities available are not necessarily tailored to meet their unique needs. This section provides an overview the systems, the professionals who work in them and the challenges they face in serving youth with LD.

The Educational System

IDEA was passed, in part, to ensure that all youth with disabilities receive special education and related services designed to meet their unique needs and prepare them for the transition to further education, employment and independent living (see 34 CFR 300.1[a] and 20 U.S.C. 1400[d][1][A]). See sidebar.

Beginning at age 16 (age 14 in many states) this transition process includes the coordination of educational and community experiences to help students explore, prepare for and exit public education ready to enter the community, workforce or postsecondary education.

The intent of transition is to create opportunities in the

school and community for youth with disabilities that result in positive adult outcomes for life. The transition process may involve:

- Raising expectations for youth outcomes
- Providing access to the general education curriculum and postsecondary expectations
- Assessing students for interests, preferences and needs
- Building students' self-awareness, self-determination and informed self-advocacy skills
- Coordinating and utilizing the community for supports and training
- Developing and utilizing long-term relationships
- Creating leadership activities that enhance students' transition process

Special education teachers and transition specialists within the secondary school system are responsible for planning, implementing and evaluating career development instruction and work-based experiences for youth with disabilities. These professionals are typically hired and supported by local school districts. The intent is for these professionals to interface with community entities—such as vocational rehabilitation, institutes of continuing and higher education, business and industry, independent living, and adult disability and community agencies—in an effort to plan for and secure services and supports for their students. Unfortunately, because many districts do not have transition specialists within the schools, these transition responsibilities may fall completely to the secondary special education teachers. Even more concerning is the number of special education teachers who are unprepared or underprepared to play the role of transition specialist.

Effective transition specialists must be competent in several areas, such as the five skill areas noted by Morningstar and Clark (2003): (1) knowledge and application of transition services requirements under IDEA, as well as emerging and recommended practices focusing on transition planning and the IEP; (2) knowledge of specific program models that focus on individualized planning and align with general secondary education; (3) skills needed

Transition Services

The term “transition services” means a coordinated set of activities for a child with a disability that (a) is designed to be within a results-oriented process that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child’s movement from school to postschool activities, including postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living and community participation; (b) is based on the individual child’s needs, taking into account the child’s strengths, preferences and interests; and (c) includes instruction, related services, community experiences, the development of employment and other postschool adult living objectives and, if appropriate, acquisition of daily living skills and functional vocational evaluation (see 20 U.S.C. 1401[34] and 34 CFR §300.43[a]).

to implement effective transition assessment, service coordination and curriculum planning within the context of general and special transition instructional programs; (4) competence in service coordination with the complex array of agencies, programs and services supporting young adults with disabilities; and (5) capacity to understand and address barriers and strategies for planning, developing, implementing and promoting transition services and programs at local, state and federal levels. These five skill areas reflect critical transition training needs identified across multiple states (Lattin, Dove, Morningstar, Kleinhammer-Tramill, & Frey, 2004).

The Council for Exceptional Children's (CEC) Division on Career Development and Transition prepared a policy paper in 2003 on the status of transition personnel preparation. The paper indicates that far too few special education teacher preparation programs require a transition education class. A nationwide study published in 2003 found that only 12 percent of special education teacher preparation programs across the country devoted at least one class to transition education content (Anderson, Kleinhammer-Tramill, Morningstar, Lehmann, Bassett, & Kohler, 2003). This lack of preservice education helps explain why special educators have limited knowledge about (1) transition requirements and strategies (Benitez, Morningstar, & Frey, 2009; Knott & Asselin, 1999); (2) methods, materials and strategies for developing meaningful IEPs that include transition goals and objectives and specifically address students' needs through curriculum and instruction (Miller, Lombard, & Hazelkorn, 2000; (3) how to develop and implement vocational programs (Wolfe, Boone, & Blanchett, 1998) and community work-experience programs; and (4) coordination of referrals to adult service providers, despite continued requirements for collaboration in special education laws (Kohler & Greene, 2004).

The lack of transition infrastructure also may contribute to the low numbers of special education students transitioning to postsecondary education. The postsecondary education system, consisting of vocational and technical schools, community colleges, and public and private universities, is a key provider of workforce development skills. However, the NLTS-2 (Newman, Wagner, Cameto, & Knokey, 2009) found that, within two years

of completing high school, compared to 53 percent of students in the general population going on to some postsecondary program, only 35 percent of students with LD enrolled in two-year community colleges, 27 percent in technical or vocational colleges and 16 percent in four-year colleges and universities. High school noncompleters were three times less likely to be enrolled in any postsecondary programs. Once enrolled, only 35.5 percent of students with LD disclosed their disability and requested accommodations in postsecondary programs. Despite stated goals, many youth with LD are leaving postsecondary programs before attaining a degree or certificate; within four years of completing high school, only 25 percent of youth with LD had completed a degree or certificate.

The Workforce Investment Act System, including Vocational Rehabilitation

The Workforce Investment Act (WIA), enacted in 1998, is the foundation of the publicly funded workforce development system outside the first-chance education system. It brings together various federal job training and employment programs to create one comprehensive service system. Eligible youth with LD can access this system for services and activities through a network of One-Stop Career Centers. The One-Stop delivery system provides a full menu of youth services at a single location where youth (ages 18 and older) may get services such as registration, orientation and eligibility determination; objective assessment to provided to review the academic and occupational skill level, as well as the service needs; job search assistance; local demand occupational information; links to alternative secondary school services; referrals to appropriate training and educational programs; summer job/academic learning opportunities; and follow-up services. It is important to note that not all services are universally accessible to youth with disabilities.

The workforce development system includes several federal agencies charged with providing specific education and/or training support for youth and adults. At state and local levels, the system includes workforce investment boards (WIBs), career and technical education and adult education agencies, vocational rehabilitation agencies, apprenticeship programs, state employment and unemployment services agencies, and state and local welfare

agencies. Many other organizations provide education, training and employment services. These organizations include community-based organizations, literacy programs, Job Corps Centers, alternative education models such as YouthBuild, unions, Centers for Independent Living and labor/management programs. The strength and coordination of the networks of these various partners vary by local and region.

The public Vocational Rehabilitation (VR) agency is one of the mandated partners of the One-Stops and the only mandated partner, of 19, with a specific focus on serving individuals with disabilities. VR is a state-level grant-funded agency with a wide range of services designed to help individuals with disabilities prepare for and engage in gainful employment consistent with their strengths, resources, priorities, concerns, abilities, capabilities, interests and informed choices. VR services for youth include determination of eligibility, assessment of vocational needs, development of an individualized plan for employment (IPE), coordination of services to reach an employment goal, vocational counseling and guidance, funding for postsecondary education and training programs, postemployment services to keep a job and referral for other services.

Eligible individuals are those who have a physical or mental impairment that results in a substantial impediment to employment, who can benefit from VR services for employment and who require VR services. If a state is unable to serve all its eligible individuals, the VR system must give priority to individuals with the most significant disabilities. Despite this “order of selection,” individuals with LD comprise the largest number of VR consumers. According to VR records for 2002–2006, 31.9 percent of transition-age youth (ages 16–25) served by VR had LD (National Council on Disability, 2008).

The professionals who work directly with youth within the aforementioned systems have primary responsibility for processes and policies by which individuals prepare for and retain employment and by which businesses access a workforce that enables them to maintain and improve their economic competitiveness (National Association of Workforce Development Professionals [NAWDP], 2008). Professionals who work strictly with youth are typically referred to as youth service practitioners. The National

Collaborative on Workforce and Disability for Youth (NCWD-Y) has defined youth service practitioners as:

Staff who **work directly** with youth through the workforce development system, for the purpose of preparing them for work, and the workplace, including intake workers, case managers, job developers, job coaches, teachers, trainers, transition coordinators, counselors (in schools, postsecondary institutions, or vocational rehabilitation offices, for example), youth development group leaders, and independent living specialists (McCain, Gill, Wills, & Larson et al., 2004, p. 2).

Among organizations involved in the workforce development system of direct service delivery, a wide range of youth service practitioners exist. The responsibilities of staff assisting youth to connect to work preparation and training opportunities and supports require both general and specialized knowledge, including the knowledge and ability to work effectively with youth with LD. The National Youth Employment Coalition (NYEC), through a contract with the National Collaboration on Work and Disability for Youth (NCWD-Y), researched and developed basic workforce development competencies for “Youth Services.”

The National Association of Workforce Development Professionals (the national professional association representing the field of workforce development) has adopted the following “Youth Services Endorsement Competencies,” which include broad categories of skills: knowledge of the field; communication with youth; assessment and individualized planning; relationship to family and community; workforce preparation; career exploration; relationship to employers and between employers and youth; connection to resources; program design and delivery; and administrative skills. (See www.ncwd-youth.info/jump-start/ksa/print-chart for a description of the Youth Services Endorsement Competencies for workforce development professionals.)

The Juvenile Justice System

The juvenile justice system was established in the United States about 100 years ago with the goal of diverting young offenders from the adult punishments of criminal courts and encouraging rehabilitation based on the individual juvenile's needs. Unfortunately, many incarcerated youth have disabilities, and their unique educational needs are not being met.

A disproportionate number of incarcerated youth struggle with literacy skills and have significant learning problems that entitle them to special education services. Although the Department of Justice's Bureau of Statistics does not regularly track disabilities among the prison population, one study found that more than 30 percent of inmates who had not completed high school or passed the General Educational Development (GED) exam had LD (Harlow, 2003). Youth with LD are over-represented in the juvenile justice system, accounting for 38.6 percent of youth with disabilities in these settings (Quinn, Rutherford, Leone, Osher, & Poirier, 2005), and are disproportionately incarcerated. In 2000, the U.S. Department of Education Office of Special Education Programs (OSEP) estimated the prevalence of disability to be 32 percent within the juvenile justice system, compared to 9 percent among school-age children (Quinn, Rutherford, & Leone, 2001).

When youth with LD are incarcerated, they may not receive educational services and supports. In addition, very few correctional facilities have formal career and technical education programs that provide offenders with marketable job skills and assistance in employment planning. Even when such career and technical education programs exist, youth with LD are often excluded because they do not have a high school diploma, adequate reading skills or other prerequisite skills (Leone, 1994; Rutherford, Nelson, & Wolford, 1985). While the model for special education service delivery specified in IDEA inherently is multidisciplinary and collaborative, special education in correctional settings often is not meaningfully linked to vocational programs (Meisel, Henderson, Cohen, & Leone, n.d.).

Many factors within the juvenile justice systems make it difficult to provide appropriate services and programming to youth with LD. The National Council on Disability

(2003) reports a lack of social and political commitment to serving youth with disabilities in the juvenile justice system. Research suggests that juvenile justice practitioners have a marginal understanding of federal disability law, the special needs of youth with disabilities or effective ways to provide services (Smith, Esposito, & Gregg, 2002). Many jurisdictions lack the time and expertise to consider disability to any meaningful degree (Arredondo, 2003). Understanding the impact that disability can play in terms of the youths' perception, demeanor and actions is necessary to make appropriate decisions about youth adjudication and disposition (Gagnon & Richards, 2008).

"Abandoned in the Back Row," a report by the Coalition for Juvenile Justice (2001), has identified a range of barriers specific to juvenile correctional settings for youth with disabilities, including:

- Lack of training and certification of juvenile justice personnel to work with youth with LD
- Difficulties transferring and maintaining school credit toward graduation
- Lack of attention to gaps in youths' education
- Limited recognition of how disabilities may affect behavior and treatment
- Lack of collaboration between public school systems and correctional facilities

There is a need to train practitioners on how to implement disability-related programs when they are designed or in a way that is most effective for youth with LD and other special needs. Front-line youth service professionals in the juvenile corrections system face substantial challenges in supporting youth with complex needs and issues and must possess a broad range of knowledge, skills and abilities to serve incarcerated youth effectively.

In summary, there is an opportunity for these three systems—education, workforce agencies and the juvenile justice system—to align their efforts and build capacity to provide effective workforce preparation and training for youth with LD and to measure its effectiveness.

Meeting the Needs of Youth With LD in Workplace Programs

In response to the numerous challenges that systems and professionals face in their efforts to transition youth with LD to the workplace, the literature identifies four specific program elements that can assist in this effort: professional development; literacy development; technology supports; and youth self-determination and empowerment. By contextualizing and reinforcing these elements, we can help youth with LD gain the skills and confidence they need to become 21st-century workers.

Professional Development Collaboratives

High-quality professional development of existing staff can lead to better practice with youth, improve program quality and increase the positive outcomes of youth (Center for School and Community Services, 2002). But for professional development to be considered high quality and have the impact the planners envision, it must be much more than the typical decontextualized one-time workshops without follow-up (McCain, Gill, Wills, & Larson, 2004, p. 2). High-quality professional development that leads to sustained change in practitioners' habits and practice must be content focused, incorporate active learning for participants, be consistent with participants' goals and other program initiatives, and be part of an ongoing learning initiative (Garet, Porter, Desimone, Birman, & Yoon, 2001).

Throughout the field of workforce development, there seems to be little professional training available for youth service practitioners and no formal system for accessing the training that is available (McCain, Gills, Wills, & Larson, 2004; National Collaborative on Workforce and Disability for Youth [NCWD-Y], 2004). Research shows that most youth service practitioners do not have access to coherent education, training and professional development opportunities that can prepare them for this work (Center for School and Community Services, 2002; McCain et al., 2004). Similarly, despite the availability of national standards for preparation of transition specialists (Division on Career Development and Transition, 2000), there are too few professionals trained to fill transition specialist positions and too few training programs. The result is that

too many transition specialists are serving without proper credentials and training.

Effective professional development can be accomplished through local or regional cooperatives that represent strengths and expertise in workplace training, adolescent literacy, technology integration, disability services and professional development delivery. An established, strategic team approach to professional development that builds ownership and provides ongoing support has proved much more effective than purchased workshops by outside experts and consultants (CEO Forum, 2000; Garcia, 2005). A team approach can develop when an active partnership and joint planning among programs and providers are in place to create shared practices (Fesko, Varney, DiBiase, & Hippenstiel, 2008; Izzo & Lamb, 2003).

The Next Generation Youth Work Coalition (Cole & Ferrier, 2009) recently conducted a scan of more than 70 federal programs and 15 state systems' programs and funding priorities to identify potential areas of support for workforce development and youth-serving professionals. While overall they found funding and system-spanning infrastructure support sorely lacking for youth-serving organizations, they did find communities with successful cross-agency networks. The report, which details a variety of state examples, shows how professional development cooperatives can be established and funded.

Professional Development to Reinforce Literacy Learning

A handful of big ideas in adolescent literacy research can inform how workforce development programs approach this topic to design programs for youth, build strategic partnerships and plan professional development. Research suggests that programs and instructors should pay particular attention to the interrelated big ideas of background knowledge and vocabulary, comprehension strategies, the synergies of reading and writing, and interest and motivation (Heller & Greenleaf, 2008; National Institute for Literacy, 2007; Torgesen et al., 2007). Although workforce development professionals are not expected to become reading specialists, through their work, they should reinforce, extend and contextualize the literacy instruction youth are receiving elsewhere. This

section provides an overview of these areas of literacy instruction and how workforce professionals might provide reinforcement.

Background knowledge and vocabulary. Youth who struggle with academics, including those with LD, will likely benefit from focused attention on their background knowledge and vocabulary as part of literacy instruction (Heller & Greenleaf, 2008). As youth move from general survey courses in secondary school to more in-depth disciplines and career training topics, specific background knowledge and vocabulary assumed in reading materials and preparation tasks become even more important. Preteaching and making explicit the background knowledge and vocabulary assumptions needed for success in a training program are keys to helping youth engage the material thoughtfully. This is especially true for students who are English language learners; even if their oral English is quite proficient, the content areas and specific job-related vocabularies are often completely unfamiliar. Learners with LD need explicit, multisensory instruction that helps them connect new vocabulary with the sounds and spelling patterns, and need many opportunities to use and hear new words in context.

Workforce development providers can coordinate with literacy providers to share lists of expectations for background knowledge and vocabulary related to specific programs and courses. Programs can also make vocabulary learning a programwide, strategic effort to give learners the context and reinforcement they need to learn.

Comprehension strategies. All students benefit from ongoing comprehension strategy instruction throughout their academic careers as the texts and expectations continue to change dramatically across content areas (a biology lab report is constructed and written quite differently than a history text, for example) (Biancarosa & Snow, 2004). The same is true for vocational preparation and workplace literacies. How texts are constructed, the key structural phrases and words, and the unique vocabularies of

specific disciplines contribute to the unique “academic literacies” of each discipline.

A variety of comprehension strategies are appropriate for all readers, but struggling readers often have a very limited repertoire. They need explicit modeling and guided practice to learn new strategies or to apply different strategies appropriate for specific texts (Torgesen et al., 2007). Supporting and reinforcing comprehension instruction youth receive in academic settings requires a deliberate increase in the amount and quality of time devoted to open, sustained discussion of reading content. Far from watering down expectations, this recommendation calls on instructors of all types of courses to increase the intellectual intensity with which they engage their learners in discussions of text and modeling of comprehension. This discussion time can be used to model and role-play thoughtful, respectful workplace conversations and critical thinking skills—soft skills that struggling students often lack and that workforce development programs are keen to impart.

Learners with LD have difficulty in comprehension for a variety of reasons. They may struggle to decode the text, stay focused, monitor their comprehension, make inferences or generalize to the larger reading purpose. They need many opportunities to experience guided practice, hear strategies modeled and be prompted to employ appropriate strategies. Workforce development providers can coordinate planning with partnering literacy providers to reinforce a shared set of comprehension strategies and teaching vocabulary.

Synergy of reading and writing. Just as academic literacies challenge reading comprehension, they also challenge learners’ writing proficiencies. While students may be able to write a personal narrative or creative story, they may struggle to construct an acceptable technical report or daily event log. Explicit writing instruction and guided practice reinforce vocabulary and comprehension strategies (Torgesen et al., 2007) to help learners generalize and internalize the academic literacies and gain confidence with them.

And while reading and writing are complementary processes, struggling writers, especially those with LD, need explicit strategy instruction and guided practice to become proficient and flexible writers (Graham & Perin, 2007). The underdeveloped writing skills of many adult education students and even GED graduates are considered a major barrier to workplace and postsecondary success (Chisman, 2009).

In addition, skills youth need for the workplace include the ability to write for multiple audiences and purposes, alone or collaboratively, and to use a variety of tools and platforms to do so (Ito et al., 2008). Learners with LD commonly continue to struggle with many of the components of writing, including spelling, handwriting, planning, revising and editing. As with reading comprehension, workforce development providers can coordinate planning with partnering literacy providers to reinforce a shared set of writing strategies and approaches, including the use of similar technologies.

Interest and motivation. Interest and motivation are absolutely key to learning, and youth with LD who have experienced years of school failure may be reluctant to re-engage with any academic system (Moje, 2006). Yet youth with LD are as driven by their personal interests as their peers. Although they may need specific skill development, they also need strategy development and interesting, authentic contexts and content. Tapping into their interests, uncovered through informal conversations, assessments and observations, energizes their motivation to do the extra work required to succeed (Madeus, Gerber, & Price, 2008). In several studies of youth and adults, Fink (1995–96, 20064) found that even severely dyslexic students reported reading a significant amount of text and actively engaging in inquiry for extended periods when driven by their interests.

Contextualized workplace education programs draw on youths' interest in authentic learning because youth can see the value and direct applicability of the training to their jobs (Chisman, 2009; Hock & Deschler, 2003; National Workforce Assistance Collaborative, n.d.; Smith, 2003). In-house and

on-the-job literacy development benefits both employers and employees, as its "applicability to real-world situations is immediate and highly effective" (Bloom et al., 2001, p. 21), and it improves workplace productivity. Many youth with LD have difficulty generalizing reading skills to specific tasks, especially in the workplace. The use of contextual learning in the workplace, specific to the job tasks, can help them compensate.

Resources and technical assistance centers.

Below are sources of additional information on adolescent literacy and learning disabilities, training materials and links to further professional learning opportunities:

Adolescent Literacy, www.AdLit.org, provides online articles and links to research-based information on instruction and supports for youth literacy development.

Carnegie Corporation of New York, www.carnegie.org, sponsors the Carnegie Council for Advancing Adolescent Literacy, which produces reports on how to advance literacy and learning for all students, including such topics as the cost of implementing adolescent literacy programs and reading in the disciplines.

The International Reading Association, www.reading.org, maintains a focus area for adolescent literacy and professional development resources and research.

LD OnLine, www.LDOnLine.org, offers hundreds of resources and articles specific to addressing the academic and life success of individuals with LD. The technology section hosts articles on how to integrate technology into teaching, learning and independent living.

Literacy Matters, www.LiteracyMatters.org, hosts an online collection of professional development modules, archived workshops and resources addressing the instruction of adolescent literacy, and a section for activities for learners.

The Role of Technology to Support Youth With LD

Digital literacy is crucial in the 21st-century workplace as businesses automate tasks and equipment; using digital means to communicate and collaborate is rapidly becoming an expected skill of workers and citizens in general (Ito et al., 2008). Ensuring that learners have the skills to use mainstream technologies productively is an important component of their preparation. For workers with LD, technology is essential (Cortiella, 2009; Izzo & Lamb, 2003). Youth in workforce development programs should be given explicit instruction and guided practice to become proficient with these technologies.

Technology can be used to differentiate instruction and services and to reinforce literacy learning (Brozo & Puckett, 2009; Silver-Paculla, 2007a). Through strategic program design, purchases and use, programs can create a more universally designed and flexible learning environment in which learners can gain familiarity with the types of mainstream technology tools that are available in the workplace and those that are available as specific accommodations. Options for online or computer-based courses in foundational skills and practice, high school credit recovery toward a diploma or specialized training can extend a program's menu of services. Below are suggestions for how programs might incorporate the use of various technologies that assist literacy acquisition and performance for learners with LD.

Equip a computer lab with a variety of mainstream and assistive technologies. Make these technologies available to all learners to use on assignments and for independent study. Provide orientation and ongoing guidance on their use through dedicated technology staff, volunteers and peer tutors. Use the lab for professional development trainings on the equipment and to offer distance training for staff. Install keyboarding tutorials and challenge learners to improve their skills. Offer a variety of common adaptive input devices such as alternative keyboards and mouse types so that learners can "test drive" them. Ask vendors for demo copies of software and hardware, and encourage an atmosphere of exploration.

Customize learner profiles. Many users would benefit from learning how to customize software to meet their personal learning needs. Have technology staff work with learners to create unique profiles that take advantage of the accessibility features and settings of mainstream operating systems and software. For example, users who have visual impairments, dyslexia or who tire easily when reading will find that the following, simple adjustments may improve their ability to stay focused: enlarging or changing text fonts, changing contrasting colors of background to text, customizing a toolbar to remove distractions; increasing the size of the cursor or decreasing the speed at which it responds. Another simple customization is sequentially designed "hot keys" that decrease the number of keystrokes or sequences to be remembered or executed and help users navigate the computer. Other simple adjustments can be found at www.microsoft.com/enable/default.aspx and www.apple.com/accessibility/mac-osx/vision.html.

Text-to-speech (TTS) software with electronic references. Literacy software with TTS and study skill features can help learners read and comprehend. Many learners with dyslexia have better listening comprehension than reading comprehension; providing TTS supports comprehension and vocabulary. Robust literacy software programs have study features such as highlighting, bookmarking, note-taking systems, dictionaries and pronunciation supports, and word processors. Using TTS with highlighting as the text is read provides a model of fluent reading, supports vocabulary development and frees attention for annotation and active comprehension.

Voice recognition software. For students who have severe dysgraphia or spelling disabilities that inhibit their writing, voice recognition software offers an alternative way to express their thoughts. Training times have been greatly reduced and accuracy increased in the latest generation of this technology. Although training the user on the software is still important and represents a time commitment, for some

users, it is well worth it. Customize and create macros and templates for content-related tasks that will pre-fill information for common tasks and assignments.

Spell-checkers. Despite the ubiquity of spell-checkers in mainstream word processors, strategies to use them efficiently are rarely taught. Install the program on all computers in the program. Teach how to use it and expect learners to access it. They should know how to attempt a spelling in order to generate a list of suggestions, how to skim the list of suggested words and how to check whether the correct word has been chosen. Teach learners how to use spell-checkers in conjunction with dictionaries, thesauruses, glossaries and other reference sources and to listen to their writing through a text-to-speech program as a means of proofreading. Consider purchasing a program specifically designed to catch the common mistakes made by dyslexic writers. **Word prediction software** is built on common patterns of English writing and misspellings and has the ability to “learn” from a user’s mistakes. These programs predict, offer a suggested next word or phrase and assist writers with poor spelling, poor motor control and difficulty with word recall.

Presentation and diagramming software.

Encourage learners to represent what they know by offering them presentation software such as PowerPoint, simple Web pages or graphic organizers. Students who struggle with language can excel with visual representations when trained to use the programs. **Graphic organizer software with outlining and drafting capabilities** is a type of visual representation that makes relationships and concepts visible and can be used before or during reading to aid comprehension. By mapping relationships visually, abstract connections and sequences can be made explicit. Software programs that convert visual presentations to outline or draft views help learners convert their thinking into writing.

Electronic references such as dictionaries, thesauruses, encyclopedias, translation dictionaries and reading pens. Definitions and explanations are now

portable and immediate. Identify dictionaries and other online reference tools to use in the program, teach and model their use and expect learners to use them to develop vocabulary skills. Look for tools with TTS that read the word and the definitions and support word study. If the number of computers is limited, consider purchasing handheld devices with many of the same features. Encourage learners to acquire and use their own devices.

Resources to assist in technology planning. Below are sources of online technical assistance to guide programs in making wise technology purchases and implementation decisions.

- Consumer Guide, www.techmatrix.org/consumerGuides.aspx, is a decision support tool for administrators and purchasers of educational technology.
- Differentiating Instruction Through Technology, www.airlearning.org, is a free, online professional development course that pairs technology tools and resources to concepts and principles of differentiating instruction to meet student needs.
- Disability Network, www.disnetwork.org, provides a guide to incorporate accessible computer technology into One-Stop Career Centers.
- EdTech Locator, www.EdTechLocator.org, provides a road map of technology integration that begins with an assessment of how programs currently use technology and suggests steps for deeper utilization.
- Tech Matrix, www.TechMatrix.org, is a database of products reviewed for universal design and accessibility features with links to manufacturers’ Web sites and a collection of research on the use of technology for instruction.
- Total Cost of Ownership toolkit, www.classroomtco.org, provides a planner that assists purchasers to project maintenance, technical support and upgrade costs when considering various technology initiatives.

Self-Determination With a Focus on Youth Empowerment

A youth-centered approach to workplace learning and literacy is a holistic way to serve youth that addresses their unique and often multiple needs while empowering them to make informed decisions about learning and work. An “empowerment approach” to literacy learning in the workplace recognizes that youth may have lost power and control over their lives owing to their disability or low literacy skills. They must develop an internal locus of control (Rotter, 1975) that places the responsibility for their actions with their own decisions and behaviors rather than outside forces or even their disability. Empowering youth with LD connotes a process of literally restoring their power by helping them to recognize and develop the skills and capacities for exercising some reasonable control over their lives and their decisions. To enable this process, professionals working with youth with LD need to create opportunities that challenge and guide youth to make decisions, experience the consequences and reflect on the results.

Self-determination training for youth with disabilities has become an important focus in special education and transition programs on the basis of research showing that self-determination skills are essential to the successful transition from school to work for individuals with disabilities (Field, Martin, Miller, Ward, & Wehmeyer, 1998; Wehmeyer, 1997; Wehmeyer & Schwartz, 1997). The concept of self-determination for students with disabilities includes several facets, such as self-awareness (awareness of strengths and weaknesses); self-advocacy (the ability to speak up and represent one’s own needs and rights); self-efficacy or self-confidence; decision making; independent performance or self-management; self-evaluation or reflection; and adjustment. Two literature reviews on self-determination research (Chambers et al., 2007; Malian & Nevin, 2002) found that self-determination is a predictor of successful transition to adult life and positive adult outcomes; that it is teachable through integrated curriculum and instruction; and that it is valued by teachers, students and family members, who all see the benefits in independence, self-efficacy and self-management. Teaching these skills in the context of workforce training and guided

employment promotes generalization of these skills (Martin, Mithaug, Husch, Oliphint, & Frazier, 2002).

As mentioned above, many youth with disabilities do not fully understand their legal rights to request accommodations in the workplace or postsecondary training environment. The shift in legal standing from entitlement under IDEA to eligibility under the ADA shifts the responsibility to the individual. Self-awareness and self-advocacy depend on knowledge. Youth with LD are often unclear about their own profiles of strengths and weaknesses and cannot articulate what accommodations may assist them. Those who are undiagnosed or misdiagnosed are at a greater disadvantage. Furthermore, youth may fear discrimination if they disclose a disability to an employer. It is important for workplace preparation professionals to offer clear and unambiguous training in this area.

Whether or not to self-disclose a disability and request accommodations at a training or employment site is an individual’s decision, but youth need to consider the consequences. Disabilities need not be disclosed at the time of an interview unless they are required for a productive interview (e.g., an interpreter or accessible space). Programs can help youth explore the consequences of disclosing upon hire and can role-play the conversations for multiple situations. Youth need to understand that employers and training programs cannot provide accommodations unless they are requested within a reasonable time frame. Accommodations are negotiated between the employer and employee and must be requested in advance; the term “reasonable” in the ADA regulations means that an accommodation may not have to be provided exactly as requested or provided immediately. Training on how to ask for and negotiate an accommodation in a positive manner is critical for generalization to future training environments.

Awareness of assistive technology should be part of any empowerment approach to helping youth with LD succeed in the workplace and other adult settings (Inge & Targett, 2006; Izzo & Lamb, 2003; Izzo, Murray, & O’Hanlon, 2005). While accommodations are specific to situations and people, there is no doubt that assistive technology can promote success in the workplace for many youth with LD. Assistive technologies can provide critical supports that increase learning independence and empower youth to access and master workplace

learning and tasks (Izzo & Lamb, 2003; Silver-Pacuilla, 2007b). For the maximum boost to personal productivity and independence, however, users need to be matched to the appropriate technologies and be proficient and comfortable with their use, which require awareness and evaluation followed by guided practice and modeling (Raskind, 1998).

Vocational rehabilitation offices, federally funded Assistive Technology Access Programs (see national listing at www.ataccess.org) or local community college resources for disabled students are sources of evaluation expertise and trial equipment or labs. Each state has an office or agency devoted to disability rights and policies.

Resources and technical assistance centers. Below are sources of additional information and online technical assistance for developing a programwide focus on youth empowerment:

- DO-IT, at the University of Washington, www.washington.edu/doi, offers a host of publications and videos on youth and adults using assistive technology for productivity in postsecondary and employment settings.
- Job Accommodations Network, www.jan.vvu.edu, is a database of business tools, resources and technical assistance to help individuals with disabilities find productive workplace accommodations; the information on LD is at www.jan.vvu.edu/media/lear.htm.
- LD OnLine, www.LDOnline.org, hosts a great deal of information briefs and articles for practitioners, parents and individuals with LD, including two targeted to the issue of self-disclosure: “Dyslexia Point of Pride or Flaw to Hide” and “Tips for Self Advocacy in the Workplace.”
- The National Center on Secondary Education and Transition, at the University of Minnesota, www.ncset.org, is a technical assistance and dissemination center that offers numerous publications for professionals working in secondary and workforce development settings.
- National Council on Independent Living, www.ncil.org, is a membership organization that works to advance independent living and the rights of people with disabilities through consumer-driven advocacy; local agencies provide training and referral to community service providers.
- National Dropout Prevention Center for Students with Disabilities, www.ndpc-sd.org, assists in building states’ capacity to increase school completion rates for students with disabilities through knowledge synthesis, technical assistance and dissemination of interventions and practices that work.
- National Secondary Transition Technical Assistance Center, <http://www.nsttac.org>, funded by the U.S. Department of Education, Office of Special Education Programs, helps states build capacity to support and improve transition planning, services and outcomes for youth with disabilities and disseminate information and provide technical assistance on science-based research practices.
- Office of Disability Programs, U.S. Department of Labor, www.dol.gov/odep/categories/youth, has a robust site for youth with disabilities, including links to federally funded technical assistance and research centers.
- The Transition Coalition, at the University of Kansas, transitioncoalition.org/transition/index.php, offers training and professional development materials as well as a database of transition “tips” with examples and findings from demonstration projects across the country.

Examples and Models

To date, no models in the literature incorporate all the key elements outlined in this paper: literacy development, self-determination for youth empowerment, collaborative practices and professional development, and technology supports. Nonetheless, the search did point to the following noteworthy examples. The first two examples share

findings from syntheses of case studies that examined how individuals with disabilities were served in WIA One-Stops across the nation, and which of the key features highlighted in this paper were evident at these sites. The third example, Choices in Transition, showcases how an inner city workforce development program met the needs of youth with disabilities for self-determination training within a transition program that utilized case management. The fourth example, YouthBuild McLean County, describes a program that incorporates a focus on literacy and empowerment as a means to accomplish workforce goals. The fifth example, High School/High Tech, a nationally adopted initiative that helps youth with disabilities enter high-tech careers, is showing positive outcomes from its work to build collaborative partnerships and focus on youth development practices. Together, these examples point toward positive models of serving youth with disabilities. Expanding successful programs like these to enhance their focus on the literacy needs of youth with LD is critical for wider success.

Example 1: WIA One-Stop Career Centers and Service to Adults With Disabilities— Collaborative Partnerships and Cross-Agency Professional Development

The first set of case studies (Fesko & Hamner, 2004; Hall & Fesko, 2004) examined how adults with disabilities (including young adults ages 18 and older) are supported through the WIA One-Stop Career Center system.

Researchers examined the coordination and collaboration techniques for better service delivery between state departments of VR and other One-Stop Career Center partners. Six sites across the nation were selected for study on the basis of location, demographic composition, economic challenges and reputation for serving adults with disabilities. The selected One-Stop sites are in Los Angeles, Calif.; Colorado Springs, Colo.; Wilmington, Del.; New Orleans, La.; Utica, N.Y.; and Clark County, Wash.

The case studies provide several examples of strategies to create effective, collaborative partnerships that can positively influence services at the One-Stops for individuals with disabilities (Fesko & Hamner, 2004). These include efforts to communicate and share information to educate One-Stop staff one another about services and resources

on a continuous basis, such as regularly scheduled meetings and staff orientations, to help alleviate challenges related to differing philosophies, operations and regulations. Opening communication channels, such as electronic listservs or publications, can contribute to an informal and ongoing information exchange, as can cross-agency planning teams to address common issues. Data sharing and standardized practices and procedures are a challenge, but are vital to case management, service coordination and efficiency. These case studies revealed that collaboration across One-Stop partners, including VR, can lead to greater leveraging of resources and expertise, a shared sense of purpose and a greater likelihood that the employment needs of individuals with disabilities will be met.

These case studies also examined strategies that enhanced training and professional development on disability issues. Staff training was identified as a crucial element in supporting people with disabilities to find jobs. Innovative approaches (Hall & Fesko, 2004), many of which required collaborative efforts among partners as they acted as trainers, consultants and service providers, included the following:

- A commitment to ongoing staff development and continuing education that builds staff competencies to sensitively meet and respond to the needs of people with disabilities and to allocate funds and resources for staff development and training to occur.
- Tailored, practitioner-oriented materials and trainings to help staff understand how a disability might affect someone's work experience.
- Opportunities for staff to interact and spend extended time with individuals with disabilities, to enable staff to gain hands-on experience and confidence working with people with disabilities.
- A mentoring mechanism whereby staff without disability backgrounds can be mentored by those who are highly skilled in providing accommodations.

- Establishment of accountability measures whereby staff must demonstrate competency in serving clients with disabilities.
- Adequate training on all facets of assistive technology, with an emphasis on staff's gaining hands-on experience.

Each of these strategies can help make services more accessible to individuals with LD. Building staff capabilities and accountability to core service principles builds the capacity of the entire system.

Example 2: WIA One-Stop Career Centers and Service to Youth With Disabilities— Collaborative Practices and Youth Leadership

This set of case studies examined how youth with disabilities are supported through the WIA One-Stop Career Center system (Kaufman et al., 2005). Researchers examined what specific context and conditions are necessary to promote increased access to services for youth with disabilities and what strategies, including policies and practices, are being used to improve access and outcomes. Six sites across the nation were selected on the basis of location, demographic composition and economic challenges, and reputation for serving youth with disabilities. The selected One-Stop sites are in Tucson, Ariz.; Albany, Ga.; Waterloo, Iowa; Syracuse, N.Y.; Providence, R.I.; and Bellingham, Wash.

Findings discuss key practices that address three components: (1) youth leadership and empowerment policies and practices; (2) collaborative efforts across partners and within communities; and (3) strategic professional development.

Youth leadership and empowerment. Successful programs facilitated intensive leadership workshops for youth that met time constraints and encouraged participation by youth on Youth Council and youth-focused committees. These programs focused on matching jobs with youths' interests, preferences and strengths and trained youth to serve as peer-to-peer mentors, tutors, recreational leaders and workshop leaders for the summer employment program. They fostered leadership skills through a variety of service learning and

professional opportunities and held high expectations for all participants, including youth with LD.

Collaborative efforts across partners and within communities. Programs with high success rates coordinated regional job readiness specialists from VR to provide employability skills training to youth in the high schools. They also conducted outreach into the community, such as having VR counselors speak to employers about disability and work accommodations or local One-Stop staff speak at local high schools. They tapped local, regional, state, and federal funds and resources and tried creative arrangements such as co-locating partners from different agencies and organizations in one building and sharing data collection systems.

Professional development of workforce development personnel. In order to collaborate to streamline some professional development activities and cross-trainings, teams provided ongoing professional development to service providers on case management, compliance monitoring, data collection, programmatic issues, financial issues, transition and other disability topics. They provided one-on-one technical assistance to new staff and supported peer-to-peer training, placed an emphasis on front-line staff and provided self-paced online trainings that led to certification or recertification.

The next three examples illustrate the diversity of models in the youth workforce development system. While the research base on these programs is still emerging, they are noteworthy for their creative collaborations and partnerships, focus on self-determination for youth empowerment and inclusion of students with disabilities in high-tech career tracks.

Example 3: Choices in Transition—Case Management and Self-Determination Training

The Choices in Transition program (1994–2007) was developed for low-income ethnic minority youth with disabilities in Chicago. The Choices in Transition model was empirically supported in studies of high school students (Taylor-Ritzler et al., 2001), adjudicated youth (Balcazar,

Keys, & Garate-Serafini, 1995), high school graduates (Balcazar & Keys, 2000) and dropouts (Balcazar & Keys, 1994) with disabilities. Of the 164 participants on whom data was collected, 67 percent had a learning disability. As of 2006, all of them had graduated from an inner city high school, and 67 percent were employed, full- or part-time; 77 percent were enrolled in postsecondary education and 40 percent had completed postsecondary education (Balcazar, Ostrander, & Garate, 2006). The program was an example of how a workforce program can incorporate self-determination training, case management and contextualized learning to improve educational and vocational outcomes for youth. Interrelated components included the following:

Goal-driven case management and outcome evaluation. Each youth was assigned a case manager, who initially worked with the youth to identify individual educational or vocational goals. Case managers also worked with youths' families to develop realistic goals. Case managers worked with participants directly or indirectly and also collaborated with other agencies to support goal attainment. Person-centered and goal-driven management and accountability helped promote self-determination skills in youth.

Interactive goal setting, action planning and social skills curriculum. Training promoted self-advocacy and empowerment. The skill development activities were designed to teach participants about their disability, their rights and how to advocate for themselves. To achieve these goals, case managers taught a course using a culturally sensitive curriculum for high school students with disabilities that was organized into four sections: (1) goal setting and action planning; (2) help recruitment (focusing on accessing resources available to participants and identifying mentors in their community); (3) knowledge of rights and services; and (4) self-advocacy and self-awareness.

Direct and authentic instruction. In this component, youth were encouraged to find jobs, enroll in vocational training at community colleges, apply to career preparation programs that met their abilities and interests, and pursue short-term certification programs and adult education programs.

Parent education and support. Case managers worked closely with family members to address their concerns and educate them about the process. They helped parents consider the long-term benefits of independence and self-sufficiency for their child. Parents were also encouraged to support their child in developing realistic expectations about future careers.

Mentoring. Participants learned to recruit their own mentors and ask for support in pursuing their life goals. Goal-driven mentoring relationships were encouraged as a way to engage natural supports in employment, academic and social settings.

Interagency collaboration. Youth utilized the services of VR to pay for postsecondary education. The project secured the collaboration of teachers and special education coordinators from Chicago Public Schools, who referred students to VR. The VR agency, in turn, designated some local offices and specific counselors as points of entry for youth. The counselors worked with the school case managers to facilitate the transition and provided adult certification for services. The City Colleges of Chicago also provided supports to participants through their disability services offices. Students were trained to ask for reasonable accommodations.

These components of the model were found to meet the transition needs of all students with disabilities (Chadsey-Rusch & Rusch, 1996; Cobb & Hasazi, 1987; Collet-Klingenberg, 1998; Dowdy, 1996; Hanley-Maxwell, Phelps, Braden, & Warren, 2000). The Choices in Transition model provided a network of supports and activities that allowed youth to develop and strengthen their self-advocacy skills and promoted self-determination to enable them to succeed in their workforce goals.

**Example 4: YouthBuild McLean County—
Boosting Youth Literacy and Leadership**

YouthBuild McLean County is highlighted by the National Collaborative on Workforce and Disability for Youth (NCWD-Y) as an innovative workforce development program serving youth with disabilities. Affiliated with YouthBuild USA and AmeriCorps, the program has

served Bloomington-Normal, Ill., and the surrounding rural areas since 1994. In YouthBuild community development programs, low-income youth, ages 16–24, work toward their GEDs or high school diplomas, learn job skills and serve their communities by rehabilitating and building affordable housing.

The McLean County program places strong emphasis on leadership development, community service and the creation of a positive mini-community of adults and youth committed to success. Participants include out-of-school and in-school youth; runaway and homeless youth; youth with disabilities; pregnant or parenting youth; youth offenders; youth in foster care or aging out; rural, urban and minority youth. This example shows promising outcomes from an emphasis on literacy and youth empowerment.

Literacy. YouthBuild’s academic program is designed to prepare students for the high school equivalency exam, a high school diploma, post-secondary technical training or college. The curriculum integrates academic skills (reading, writing and mathematics) with life skills, social studies, leadership opportunities and vocational training. YouthBuild McLean County works closely the GED/Adult Literacy Program at Heartland Community College. Youth with cognitive and learning disabilities get educational assistance that focuses on individual needs from specialists in literacy and numeracy. All participants, including youth with disabilities, are supported through individualized education planning. On average, 75 percent of participants complete diploma requirements or pass the GED each year.

Empowerment. As part of AmeriCorps, the program is placing greater emphasis on service learning and youth leadership. Activities include participating weekly in the America Reads Program at a local low-income day care center; building and renovating structures at children’s camps; serving the elderly and people with disabilities; and providing environmental services around the community, including recycling and water quality monitoring. In addition to preparing youth for work, these program activities assist them in overcoming negative work habits and

attitudes and help to empower them through empathy and understanding.

Participants wield legitimate power through the Youth Policy Committee, composed of seven peer-elected youth. All program decisions are made through a democratic process directly involving the policy committee and the program director. Decisions include hiring and firing staff and trainees, improving program management, implementing program design changes, reviewing budgets, addressing personnel problems, providing input in staff evaluations, addressing disciplinary issues with other youth, and planning outings and events.

By customizing services through individual development plans, the program can meet learners’ literacy needs along with their workforce development goals. Strong leadership training leads to youth empowerment, and an alumni program, YouthBuild’s Graduates, provides support, such as self-esteem building, personal counseling, study skills and educational tutoring, for as long as an individual needs it.

Example 5: High School/High Tech (HS/HT)—Leveraging Technology for Youth Success

High School/High Tech (HS/HT) is a national network of state and locally operated programs designed to provide young people with all types of disabilities (primarily LD) the opportunity to explore jobs or postsecondary education leading to technology or science careers. Begun in the 1980s, it was America’s first technology-based transition program for youth with disabilities and has grown to be a nationally supported initiative. Cooperation among federal, state and local agencies (including students, parents and caregivers, businesses, educators and rehabilitation professionals) helps to promote and sustain HS/HT programs (NCWD-Y, 2007).

HS/HT’s purposes are to reduce the high school dropout rate of youth with disabilities, increase their enrollment in postsecondary institutions and improve their participation in employment-related activities, especially in technology careers. The HS/HT Guideposts (based on the NCWD-Y’s “Guideposts for Success”) are

a statement of principles that provide direction for young people transitioning into adulthood. They encompass five major areas that research has shown help youth with disabilities prepare for their future: school-based preparatory experiences; career preparation and work-based learning experiences; youth development and leadership; connecting activities; and family involvement and support. The incorporation of technology as a key component for youth with disabilities, youth development and leadership and connecting activities corresponds to three of the program components highlighted in this paper.

Youth development and leadership. Activities that help HS/HT students become self-sufficient and productive include adult and peer-to-peer mentoring; self-advocacy training; and youth development, community service and service learning activities in the community.

Technology. HS/HT incorporates assistive technology into its local models as supports for learning as well as job accommodations. In addition, the technology component aligns with local, state and national goals to increase the number of students entering technology and science careers. HS/HT has remained a relevant and vital community partner as communities look to meet emerging workforce and postsecondary goals to encourage students in the STEM (science, technology, engineering and math) fields.

Connecting and collaborating activities. HS/HT programs focus on strong collaborative partnerships to ensure that youth transition properly into the next phase of their lives. The focus is on services and activities requiring support from other organizations, such as educational tutoring, assistive technology assessments and equipment, transportation, post-program supports and financial planning.

The potential of the program can be seen in Florida, whose HS/HT enrolls more than 1,100 students in 37 project sites across the state. More than 100 Florida high schools are partners of Florida HS/HT, which has been shown to increase self-esteem and reduce the dropout rate of students with disabilities. Each year, nearly 95 percent of

Florida HS/HT graduates enter postsecondary education or employment. Statistics for Florida's 2009 HS/HT programs show that services were provided in 107 schools and alternative education settings, with 239 high school students (representing all grades) having secured employment. The Florida HS/HT program experienced approximately a 2 percent dropout rate. Approximately 73 percent of Florida HS/HT graduates entered postsecondary education after graduation, compared to only 22 percent of other graduates with disabilities in Florida, a threefold difference (Able Trust, www.abletrust.org/hsht).

Although rigorous evaluation is still needed to determine the long-term effectiveness and usefulness of the models and the combination of the key features highlighted in this paper, there is much to learn from them. They serve as examples that hold promise for promoting positive outcomes for youth with LD in workforce development programs.

Implications

This paper lays out the importance of four key elements to meet the complex needs of youth with LD within the workforce development system: literacy development, youth self-determination, collaborative practices and professional development. Together, these elements can improve both the workforce development system and the quality of the life of youth with LD in the workplace and in future education and/or vocational training. This section describes how programs and policymakers may work to support productive alignments and future research.

What Are the Challenges?

The demands of the U.S. workplace are changing, and even entry-level jobs are requiring more from workers: more literacy, more technological savvy, more intrapersonal and interpersonal skills (Center for Workforce Performance, n.d.; Jurmo, 2004). National employment numbers and work history trends suggest that many youth with LD are not succeeding in work environments (Cameto et al., 2003; Kaye, 2005; Newman et al., 2009). Equipping youth with LD for success means empowering them through literacy and a self-determined approach to their goals, which will require that workforce development

programs recognize their specific needs and shift their focus to meet these needs.

Currently, few workforce development programs for youth are configured to address the literacy and empowerment needs of youth with LD. Challenges exist both within and across systems. Collaboration and meaningful policy and partnership development across the multiple systems that address the development of work skills for youth are often weak and inconsistent. Too many youth continue to leave high school without clear transition plans and an understanding of their rights and responsibilities. Furthermore, workforce development programs are often staffed by professionals who lack the knowledge and expertise to effectively serve youth with LD. While related competencies and guidelines have been established for workforce development professionals in each participating system, little has been done to incorporate them into formal professional development efforts that provide credentials and hold staff accountable for high-quality performance and outcomes.

What Can Be Done?

Challenges both within and across participating systems may be addressed through collaborative cross-system partnerships and networking mechanisms at local, regional and state levels to develop policy and build staff and program capacity to improve outcomes for youth (Fesko, Cohen, Hammer, Boeltzig, & Timmons, 2003; Fesko, Varney, DiBiase, & Hippenstiel, 2008); Timmons, Schuster, Hammer, & Bose, 2002; Timmons, Whitney-Thomas, McIntyre, Butterworth, & Allen, 2004). Collaborative partnerships bring together policymakers, program developers and practitioners to focus their collective expertise and resources on developing a common understanding of the characteristics and needs of youth with LD, a shared language and a commitment to rise above territorial conflicts (Brown, DeJesus, & Schiraldi, 2002) and improve the quality of transition planning and services for youth.

The President's Commission on Excellence in Special Education (U.S. Department of Education, 2002) suggested connecting special education to outside services such as VR as a way to improve postschool outcomes for youth. The commission also found that not enough inter-agency activity occurs between schools and VR agencies. It

suggested that fiscal disincentives be removed and waiver options provided to promote cost sharing and resource pooling among agencies to improve the availability and cost-effectiveness of transition services and supports for youth with LD (National Center on Secondary Education and Transition [NCSET], 2005).

While partnerships are the "cornerstone of both the workforce development system and the systems that support the employment of people with disabilities" (Fesko, Varney, DiBiase, & Hippenstiel, 2008 p. 6), collaborative partnerships do have their challenges:

1. Different policies, procedures, measurements and cultures that need to be understood and addressed to improve coordination (Elinson, Frey, Beemer, Riley, & Kruger, 2005)
2. Concerns about merging the cultures of various partners and about the loss of professional identities (Fesko, Cohen, & Bailey, 2002)
3. Data sharing across partners and concerns about the protection of customers' confidential information (Timmons et al., 2004)
4. Lack of consensus on common goals and redefining roles in conjunction with these goals at the direct service and system levels (Fesko, Varney, DiBiase, & Hippenstiel, 20087)
5. Different employment philosophies, including the belief in the capacity of people with disabilities to work

Despite these challenges, research indicates that collaboration across systems and programs positively affects service delivery for youth with disabilities (Fesko et al., 2003; Timmons et al., 2002; Timmons et al., 2004). Both the process and the outcome can be enriched through effective partnerships (Fesko, Varney, DiBiase, & Hippenstiel, 20087).

One way to initiate collaborative partnerships is to resource map. Community resource mapping, also referred to as asset mapping or environmental scanning, has been used in the business arena for many years in varying forms. Community resource mapping is best considered a system-building process used to align resources and policies in

relation to specific system goals, strategies and expected outcomes. Mapping of youth services, supports and programs within a community can help to identify (1) resources available to individual youth in a particular community; (2) new or additional resources to sustain existing specific youth activities or initiatives within a community; and/or (3) resources to assist in creating and building capacity to support a more comprehensive community system for serving youth (Crane & Mooney, 2005). The first outcome typically occurs at the local level, while the second and third outcomes can happen at any level—local, state or federal.

The community resource mapping process acknowledges that individuals and organizations have the capacity to create real change in their communities, but that no one entity can do it alone. With increased accountability, tight budgets, resource shortages and fragmented services, it is a sound decision for communities to encourage cross-agency and cross-systems coordination. Insight into a community's existing partnerships and programs, resource allocations and policies, and priorities and assets can help the community evaluate its overall effectiveness in serving youth with disabilities. It can also support the creation of a strategic plan to improve the alignment, coordination and, ultimately, delivery of services by identifying new resources; ensuring that all youth have access to the resources they need; avoiding duplication of services and resources; cultivating new partnerships and relationships; providing information across agencies that work with youth; and encouraging collaboration (Crane & Mooney, 2005).

When combined with community information, resource maps can provide a comprehensive picture of a community's vision, goals, projects and infrastructure and can provide consumers (i.e., youth and their families) with information about where and how to acquire needed supports and services.

Another strategy that builds on resource mapping is self-assessment at the systems level. The transition framework of national standards and quality indicators developed by the National Alliance for Secondary Education and Transition (www.nasetalliance.org) provides an evidence-based self-assessment tool that is particularly useful in identifying goals and priorities and reaching consensus on the critical issues of individual schools and school

systems. Other systems providing transition services can also use the tool.

Other useful transition frameworks that focus on meeting the needs of individual youth include the "Guideposts for Success" developed by the National Collaborative on Workforce and Disability for Youth (www.ncwd-youth.info/topic/guideposts) and the Taxonomy for Transition Programming developed by Kohler and hosted by the National Secondary Transition Technical Assistance Center at the University of North Carolina (www.nsttac.org). Both provide a comprehensive road map of what needs to be in place for youth to succeed across the transition domains, including employment.

This paper shares several ideas of how potential partners can extend their expertise beyond traditional boundaries to strengthen the service network for youth with LD. Programs are encouraged to consider how to contextualize learning in ways shown to be effective. Making these changes, however, requires that workforce development professionals receive targeted professional development that will prepare them to collaborate across agencies, reinforce literacy instruction, use technology strategically and foster youth self-determination.

Policymakers and program developers can encourage the growth and development of effective programs and policies for youth with LD by funding and otherwise supporting the formation and evaluation of model demonstration programs and projects that:

1. Apply current research on best practices for youth with LD
2. Scale up and evaluate program elements that show promise
3. Incorporate literacy, youth empowerment and technology elements
4. Hold programs and individuals accountable for high expectations and outcomes
5. Require the creation and implementation of sustainable cross-disciplinary and/or cross-system collaboration strategies

Policymakers and program developers must also focus their efforts on providing collaborative, high-quality

professional development opportunities that are consistent with the best available research and practice to build the capacity and competencies of professionals to implement effective programming for youth with LD.

There is much we still need to know about how best to equip youth with LD to succeed in today's workforce. We need longitudinal data to inform planning and policies, including research specific to youth with LD; evaluation and outcome data on programs that have been funded to scale up beyond a single locality; and guidance on how to adapt and extrapolate from system-specific knowledge and best practices to inform collaborative and alignments. What we do know is that literacy is critical to our youths' future, and continuing the trends of poor employment outcomes for youth with LD is unacceptable.

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