Comments from Peer Reviewers

"This paper will provide the foundation needed for the collection of manuscripts to become a cornerstone in the literature discussing the needs of students with disabilities seeking postsecondary education…. The paper strongly makes the point that development of increased self-determination skills and vocational goals can facilitate the successful transition from secondary to postsecondary education and then into the workforce. Policy statements and research findings support this contention…So little currently exists about transition of students into postsecondary education – this paper will contribute greatly to the national discussion. It strongly supports a student-directed method of increasing the success of students with disabilities."

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White Paper

Self-Determination and Career Development: Skills for Successful Transitions to Postsecondary Education and Employment

Abstract

The demands of today's workforce include advanced training and high standards for productivity, problem solving, and teamwork. While several studies report that the enrollment rates of students with disabilities in postsecondary education is increasing, they are experiencing limited success. Numerous authors suggest that the poor post-school outcomes of youth with disabilities are due to their limited development of self-determination and career decision-making skills.

How the report is organized

This paper provides a brief review of the problems that arise from the lack of these skills, models that deliver transition services that gain improved employment outcomes, and emerging practices for promoting the development of self-determination and career skills that both special educators or postsecondary disability personnel are implementing. Finally, recommendations for policy, practice, and future research are presented.

❶ *Review of Problems*

❷ *Models that Deliver*

❸ *Emerging Practices*

❹ *Recommendations for Policy*

Introduction

The New Freedom Initiative announced by President Bush in February 2001 represents an important step in working to ensure that all Americans with disabilities have the opportunity to learn and develop skills, engage in productive work, and choose where to live and participate in community life. The goals of the President's Initiative include increasing access to assistive and universally-designed technologies, expanding educational opportunities, and integrating Americans with disabilities into the workforce (http://www.hhs.gov/newfreedom/, January 11, 2002). The New Freedom Initiative supports the vision of many parents, profes-

sionals and students with disabilities. These stakeholders believe the promise of the Individuals with Disabilities Education Amendments of 1997 (IDEA) which states "children with disabilities should be … living a full life, raising families, being part of their community" (IDEA of 1997, PL 105-17, p. 1).

Yet, how do educators and parents assist students with disabilities in gaining the skills and supports necessary to enter postsecondary education, the labor market, and to raise their families and fulfill their vision? Numerous authors suggest that parents and educators must promote the self-determination of students with disabilities (Algozzine, Browder, Karvonen, Test, & Wood, 2002; Benz, Lindstrom & Yovanoff, 2000; Field, Martin, Miller, Ward, & Wehmeyer, 1998; Izzo, Hertzfeld & Aaron, in press; Wehmeyer, Morningstar & Husted, 1999). Others have stated that many students with disabilities are not receiving the career development they need to initiate and maintain employment following school (Farley & Johnson, 1999; Getzel, Stodden, & Briel, 2000; Benz & Kochhar, 1998). The School-to Work Opportunities Act of 1994 and IDEA of 1997 promote quality transition programs and services that empower students to make career and life choices that will enhance their employment outcomes. Students with disabilities need to establish career goals through self-directed career planning and learn to monitor their progress through the use of time-management strategies (Getzel et al., 2000). They need to be empowered to act as causal agents towards their own future – that is, they need to be self-determined, acting on decisions such as where they want to go to school, work, and/or live in their community. In addition, career development services need to include instruction in career exploration, career self-management skills, and self-advocacy skills (Hitchings, Lusso, Ristow, Horvath, Retish & Tanners, 2001). Educators and parents can teach self-determination skills and help improve employment outcomes through a comprehensive career development program that includes both school and work-based learning.

This paper will provide a brief review of the problems that youth with disabilities face as they transition to adult life. Definitions of self-determination and career development will be presented, followed by descriptions of model transition programs that obtained improved post-school outcomes. Based on the results of these programs and the recommendations made in the literature, suggestions and strategies for developing self-determination and career decision-making skills at the secondary level are presented. Since many students need to develop and expand their self-determination and career development skills at the college level as well, strategies for assisting students in developing these skills within the postsecondary setting are also discussed. Finally, recommendations for practice, policy and future research are presented as means of advancing self-determination, career development and better post-school outcomes for students with disabilities in both secondary and postsecondary settings.

Nature of the Problem

S weeping changes in the workplace characterized by technological advances, intense competition, and high standards of productivity have created a gap between the skill demands of our nation's workplaces and the skills of the emerging labor force (Stodden & Dowrick, 2001). The magnitude of this challenge for students with disabilities is emphasized by the findings of the National Longitudinal Transition Study. When compared to students in the general population, students with disabilities drop out of school at higher rates, have higher absenteeism, lower grade-point averages (GPA), and more prevalent feelings of poor self-esteem (Blackorby & Wagner, 1996). Other researchers agree that students with disabilities lag far behind their peers without disabilities on factors such as achievement, graduation rates, postsecondary attendance, and employment outcomes (Benz, Yovanoff & Doren, 1997; Benz, Lindstrom & Yovanoff, 2000; Blackorby & Wagner, 1996; Izzo, Cartledge, Miller, Growick & Rutkowski, 2000; Wagner, Newman, D'Amico, Jay, Marder, Butler-Nalin, Marder & Cox, 1991). The majority of these students have difficulty succeeding in high school, and only about a quarter of them pursue postsecondary education. Rifkin (1995) concluded that few of these students are prepared to face the demands of the technological workplace.

Federal legislation has emphasized the need for higher academic standards, including those for students with disabilities. IDEA of 1997 mandates that the IEP for students with disabilities include a statement indicating how the student's disability affects their involvement and progress in the general curricula. Most states have established academic standards for student achievement through state improvement plans funded by Goals 2000: Educate America Act (Ordover & Annextein, 1999). Ohio has implemented state-mandated proficiency test in five areas: citizenship, math, reading, writing, and science. According to data reported by the Ohio Department of Education, the percentage of ninth-grade students with disabilities who passed the proficiency tests range from .3 to 30% below their non-disabled peers (http://www.ode.state.oh.us/, January 18, 2002). Thurlow, Elliott and Ysseldyke (1998) have examined assessment data on a national level. They reported that "students with disabilities tend to perform lower than students without disabilities" (p. 92). Clearly students with disabilities are not gaining the academic skills needed to pass proficiency tests at the same rate as their non-disabled peers. The secondary education curricula and the related assessments must be aligned with career development and transition services to assist youth to achieve productive adult outcomes.

Though students with disabilities do not enroll in college at the same rates as their non-disabled peers, according to Henderson (1999) the enrollment of full-time freshmen with disabilities for both two and four-year colleges and universities

> The secondary education curricula and the related assessments must be aligned with career development and transition services to assist youth to achieve productive adult outcomes.

quadrupled from 2.3% in 1978 to 9% in 1998. The 2000 survey of full-time freshmen enrolled in public and independent four-year colleges/universities indicated that freshman who reported having a disability averaged between 6% in 1988 to 8% in 2000 (Henderson, 2001). Henderson (2001) also reported that the percentage of students reporting a learning disability rose from 16% in 1988 to 40% in 2000. Since the 2000 survey did not include freshmen from two-year colleges, it is impossible to discern what the enrollment patterns are within two-year colleges.

However, in spite of the increased access to higher education, many students with disabilities have met with limited success in college (Stodden, 2000). One issue that may contribute to the difficulty that students with disabilities have within college is the dramatic difference in the levels of support that students receive in high school, as compared to the accommodations provided in college (Stodden, Jones, & Chang, 2002). In a secondary school setting, special education teachers and paraprofessionals are mandated by IDEA of 1997 to provide and coordinate specially designed instruction and accommodations in both general and special education classes. Thus, students with disabilities transition from high school to college with limited skills in self-determination and self-advocacy because their high school service providers and parents have all too often taken the responsibility to negotiate and advocate for students' academic and social needs.

The need for adequate self-determination and advocacy skill development in high school is critical because in college, students with disabilities are expected to take responsibility for their learning by requesting needed accommodations to gain access to the academic content. The Americans with Disabilities Act (1990) and Section 504 of the Rehabilitation Act of 1973 only mandate access to higher education and do not mandate a vast array of support personnel to meet students' needs. Furthermore, many college students with disabilities report that they are not comfortable requesting accommodations from faculty (Izzo et al., in press). Often times the student must advocate for accommodations with faculty who may not understand the nature of specific disabilities, or the common accommodations that are appropriate. Many students with disabilities do not understand their strengths and limitations well enough to explain how certain compensatory strategies will "equal the playing field" but will not grant an "unfair advantage"(Gordon & Keiser, 1998).

The necessity for persons with disabilities to gain self-determination skills in high school also has serious ramifications within work settings. According to Wehman, Brooke, and Inge (2001), one of the major barriers that must be considered in the area of unemployment for people with disabilities is their lifelong inexperience of gaining control over the major events of their lives. The culture of America is strongly rooted in the individual's ability to exercise power, control, and influence within their own lives. Yet, people with disabilities throughout their educational experience and into their adult life are consistently limited or denied the opportu-

nity to take risks and make decisions and therefore do not develop self-determination skills. Given that only 29% of people with disabilities ages 18-64 are employed (National Organization on Disabilities, 1998), it is not unreasonable to assume that the lack of self-determination skills contributes to these poor employment outcomes. Although national experts, local service providers, faculty and students agree that self-determination and career development skills are critical skills needed for post-school success, lack of these skills continue to be identified as a major barrier to achieving positive post-school outcomes.

In summary, students with disabilities drop out of high school at higher rates, have higher absenteeism, lower GPAs, lower achievement, and poor self-esteem, as compared to their non-disabled peers in high school (Blackorby & Wagner, 1996). In addition, young adults with disabilities have poor post-school outcomes, as measured by postsecondary enrollment rates and employment earnings (Benz et al., 2000). In response to these problems, many authors suggest strengthening secondary and postsecondary programs by promoting the development of self-determination and career development so that youth gain the critical skills needed to navigate adult life. This paper will explore the definitions of self-determination and career development, present successful transition models that have incorporated these elements within their framework, and then review emerging practices that have been implemented at both the secondary and postsecondary levels.

Definitions of Self-Determination and Career Development Skills

Wehmeyer (1998) has written extensively about the need for people with disabilities to become more autonomous and to learn how to make choices and advocate for their wishes and needs. Stodden (2000) writes that self-determination/self-advocacy or the ability to articulate one's needs and make informed decisions about the supports necessary to meet those needs is a critical skill required of students with disabilities in postsecondary education and employment. In order for educators to teach self-determination skills and create opportunities for students to apply these skills within the educational setting, educators need to understand the specific components of self-determination and career development. These concepts are defined and discussed below.

SELF-DETERMINATION

Self-determination is defined as a combination of skills, knowledge and beliefs that enables a person to engage in goal-directed self-regulated behavior (Field et al., 1998). Self-determined people know what they want and use their self-advocacy skills to get it. From an awareness of personal needs, self-determined individuals choose goals and then doggedly pursue them. Self-determination involves asserting their presence, making their needs known, evaluating progress toward meeting

their goals, adjusting their performance, and creating unique approaches to solve problems (Martin, Huber Marshall, Maxson & Jerman, 1996). According to Wehmeyer and Schwartz (1995), students who obtain self-determination skills while attending school have a greater chance for achieving positive post-school outcomes than students who do not acquire these skills.

One of the most comprehensive definitions was developed by Martin and Huber Marshall (1995). They described seven components of self-determination: self–awareness, self–advocacy, self-efficacy, decision-making, independent perform-ance, self -evaluation and adjustment (Martin & Huber Marshall, 1995). Each component is described as follows:

- Self-awareness begins with the ability to identify and understand needs, interests, strengths, limitations, and values.
- Self-advocacy refers to the ability to assertively state wants, needs and rights, determine and pursue needed supports, and conduct your own affairs.
- Self-efficacy often is referred to as self-confidence – the belief that you expect to obtain your goal.
- Decision-making is the complex skill of setting goals and standards, identifying information to make decisions and considering past solu-tions, generating new solutions if needed, and choosing the best option to develop a plan.
- Independent performance refers to the ability to initiate and complete tasks by using self-management strategies.
- Self-evaluation includes monitoring task performance and determining if the plan has been completed and the goal met.
- Adjustment is the process of changing goals, standards and plans to improve performance so that the person ultimately develops a better understanding to their needs, strengths and limitations. Thus, the self-determination process continues to cycle through a self-improvement process.

In order to fully understand the significance of self-determination, it is necessary to have some understanding of the relationship between self-determination and locus of control. The concepts of self-determination and internal locus of control are highly correlated. Rotter (1975) stated that students must develop an internal locus of control, defined as a belief that you have the opportunity to choose, make decisions, and act on your environment. Persons who develop an internal locus of control also have self-determination. The positive relationship between the devel–opment of self-determination and internal locus of control indicates that as people have the opportunity to choose, make decisions and act on their environment, they develop an internal locus of control (Lefcourt, 1982). Halpern (1996) rec-ommended that students have many opportunities to experience success on many levels, and over time, to enhance their internal locus of control. Students with dis-

abilities may not learn to self-advocate or self-determine because parents and teachers are constantly controlling their environment to such an extent that students themselves do not have the opportunity to choose and act independently (Yuen, 2001). Students could be given many opportunities to choose through career exploration activities. Students could choose to read some books about a preferred job, choose to interview adults with different kinds of jobs, choose to job shadow in different businesses, or complete a career plan and take elective courses that will prepare them for entering a specific occupation.

In sum, self-determination can be considered analogous to an "umbrella" consisting of several "spokes" or sub-skills that are interconnected and work together to form the whole object. All the spokes must be strong in order for an umbrella to function and serve its purpose, just as all of the sub-skills of self –determination must be strong in order for a person to function independently and achieve their personal goals. By providing opportunities for students to become aware of their needs, interests, strengths and limitations, and then self-advocating to gain the supports they need to succeed, special educators and parents can build the self-efficacy that students need to make decisions, take action, evaluate their actions, and adjust their goals.

INFLUENCE OF CULTURE AND GENDER ON THE DEVELOPMENT OF SELF-DETERMINATION

An individual's sense of self-determination and career development is affected by culture and gender and is mediated by the unique needs and demands of each person's environment, in conjunction with the individual's wants and needs. How a person defines "successful adulthood" is determined by culture-specific values and expectations about many important issues, such as work, community integration, role expectations and social functioning (Geenen, Powers and Lopez-Vasquez, 2001; Ewalt, & Mokuau, 1995). Cultural and linguistically diverse (CLD) groups often define roles differently, and parents can be a valuable resource in helping educators understand transition outcomes that are valued within a family's culture (Geenan et al., 2001). For example, in the Hawaiian and Pacific Islander cultures, the empowerment of an individual evolves through the empowerment of the family; therefore the individual in concert with his/her family determines the best choices or decisions for his or her future. Based on personal inquiry about the meaning of self-determination within their culture, graduate students reported the following:

> "In the Chinese culture individuals do not always have the ability to set and achieve their own goals. Interdependence instead of independence is emphasized and so an individual's actions are directly related to their family. For instance, children may choose their major for college depending on what their parents want them to choose, i.e., a major/career that will benefit

the family as a whole" (Chinese graduate student, personal communication, April 18, 2002).

A second graduate student commented:

> "In American Samoa, the concept of self-determination is interpreted in yet another way. As a Samoan, one's self-determination is characterized in three contexts: God (religion), family, and culture (village). These three components shape one's self-determination. One's self-determination represents the fear of God, dreams and hopes of the family, and the customs and values of culture (village). A person acts on his or her endeavors, keeping in mind the significant roles of these three components in his or her life. Therefore, positive actions and attitudes need to be [valued] highly so that success for the individual and the larger community all will come about. Samoans build their lives around the context of a group working together to achieve a common goal. A person acts individually on behalf of everyone in the group" (Samoan graduate student, personal communication, April 16, 2002).

Gender is also a strong factor in the development of one's self-determination. In many cultures males are more encouraged and validated when they act with a sense of autonomy and independence, whereas girls are encouraged and validated for responding to the needs of the group first and making choices for themselves based on group or family members' needs and responses to their choices. This developmental process is common in both the white, Anglo-Saxon culture and the Hispanic culture. In Hispanic cultures generally the father plays a strong role in determining the future choices of daughters.

In summary, the major point of consideration for educators and other professionals involved in the psychosocial development of youth is that they must always consider cultural and gender issues as they interact with their students and their families and as they construct classroom activities to foster skills in self-determination.

CAREER DEVELOPMENT

Career development is defined as a process that coordinates school, family and community resources to facilitate each individual's potential for economic, social, and personal fulfillment (Brolin & Kokaska, 1979). A number of career education and transition models have been developed for students with disabilities since the early 1980's (Wehman, 1996). Many of these models identify five common stages of career development:

- Career awareness begins during the elementary years and involves developing self-awareness of your potential by learning about roles in family, work, and society and developing work values and positive attitudes.

- Career exploration consists of activities that assist students in gathering information to explore their own interests, skills, and abilities and the requirements of various jobs. Ideally these activities are done in school-based and work-based settings. Once students understand their own career profile, they can better select potential jobs and work settings to explore that maximize their interests, abilities, aptitudes and strengths.

- Career decision-making involves the process of selecting a career area that matches your interests, abilities, aptitudes and special needs. Once students understand their own strengths and challenges and the requirements of different jobs, they can make informed decisions about what career areas to prepare to enter.

- Career preparation focuses on the development of specific competencies needed to function in specific work, home, and community settings.

- Career placement is the responsible participation in work settings and developing support systems to maintain independent functioning.

Career development for students with disabilities must be a fairly predominant focus of the elementary, middle and secondary educational program. Teachers must include real-life work experiences, career-oriented field trips, and contextually-based academic instruction that embeds reading, writing and math skills into functional job skills needed to accomplish work tasks. Numerous authors suggest that this level of intervention is critical to the career development of students with disabilities (Benz & Kochhar, 1998; Brolin & Kokaska, 1979; Clark, Carlson, Fisher, Cook, & D'Alonzo, 1991; Wehman, 1996). Researchers have found that student post-school outcomes were enhanced when programs integrated career information and guidance activities into learning experiences and created a career development program that began in elementary grades and progressed throughout middle and high school. (Rogers, Hubbard, Charner, Fraser, and Horne,1995). Student success was also enhanced when programs provided students with options and support to access postsecondary education, and when the entire school-based learning component was structured to promote student self-determination, especially for students with special needs (e.g., at-risk students and students with disabilities). Benz, Yovanoff, and Doren (1998) found that students who experienced comprehensive career development activities that integrated career and academic skills experienced better employment and post-secondary educational outcomes one year out of school.

All comprehensive guidance, career planning and counseling interventions have as their goal the expressed intent of enhancing the self-determination of youth, which strengthens their educational progress (Myrick, 1997). Specifically, these initiatives focus on the development of students' self-awareness, self-efficacy, self-advocacy,

and decision making in relation to a student's career interests and abilities, which are four major components of self-determination. The hope is that when implemented, comprehensive guidance, career planning and counseling
programs will significantly contribute to learning climates that promote academic achievement, self-determination, and social emotional growth (ASCA/NACAC, 1986; Herr, 1982). Initial research evaluating relationships between guidance programs and student achievement support the positive impact of these reform efforts (Whiston & Sexton, 1998). These findings have been replicated across special population groups, such as low achieving and/or students with learning disabilities (Borders & Drury, 1992). Two independent meta-analyses concluded that the integration of career interventions with academic subjects leads to consistent increases in student achievement across grades K–12 (Baker & Taylor, 1998; Evans & Burck, 1992). Lapan, Gysbers, Hughey and Arni (1993) evaluated the impact of an integrated guidance and language arts unit for high school juniors. A clear positive relationship was found between mastery of guidance competencies and English grades.

The School-to-Work Opportunities Act of 1994 and the Perkins Act Amendments of 1990 encourage teachers to link academic competencies to the real world of work. Providing students with understanding and experiences in how academic skills are applied in their chosen industry is essential to empowering students to make realistic career and life choices. Teachers should integrate theoretical learning with applied, experiential learning – that is they need to connect school and work-based learning. The Goals 2000: Educate America Act provides funds for states to develop and implement a state improvement plan which details how high schools will provide career guidance and integrate academic, vocational, and work-based learning (Ordover & Annexstein, 1999). Although a positive relationship exists among career development, academic instruction, and achievement, and the existing legislation mandates their integration in schools, many students with disabilities are exiting high school without the academic or career planning skills needed to enter postsecondary education and/or navigate the labor market (Getzel, Stodden & Briel, 2000).

In summary, self-determination and career development skills are critical elements if persons with disabilities are going to pursue a self-directed future in postsecondary education and/or the workplace. Hitchings et al (2001) reported that a major attribute of highly successful adults with learning disabilities is a "strong sense of control over career-related events and a conscious decision to take charge of their life" (p.8).

Model Programs that Integrate Self-Determination and Career Development into School-to-Work Transition

Sufficient evidence exists to suggest that students can become more self-determined and career-focused when given appropriate instruction and opportunities to practice self-determined behaviors (Agran, 1997; Algozzine, et al., 2002; Field, Martin, Miller, Ward & Wehmeyer, 1998; Wehmeyer, Agran, & Hughes, 1998; Serna, & Lau-Smith, 1995). Educators and parents must restructure and expand their roles, infuse self-determination and career development into the general curricula, and create numerous opportunities for students to make choices and experience the consequences of self-regulated behavior with guidance from their support team. Four model transition programs that have successfully provided many opportunities for students to develop self-determination skills within context of the school-to-work transition are described below.

TRANSITION PROGRAMS WITH SIGNIFICANTLY IMPROVED EMPLOYMENT OUTCOMES

Four programs have collected empirical evidence that attests to improved employment outcomes for youth with disabilities. All four programs were initiated in the early 1990s and continue to be sustained today. Although there are many programs that teach self-determination and career development skills, few have been tested as rigorously as the following four programs: (1) Youth Transition Program in Oregon, (2) The Bridges … from School to Work Internship Program, (3) The Great Oaks Job Training Coordinator's Program in Ohio, and (4) Teaching All Students Skills for Employment and Life (TASSEL). All the above programs were supported in part by federal funding through the Office of Special Education Program (OSEP) discretionary grant program.

(1) Youth Transition Program: *A Model For Teaching Self-Determination And Transition Skills.* One successful model transition program that incorporated many of the above strategies is the Youth Transition Program (YTP) operated collaboratively by the Oregon Department of Education, the Oregon Vocational Rehabilitation Division, the University of Oregon and local schools. This model incorporated several predictive factors that are associated with secondary and postsecondary outcomes of students with disabilities (Benz et al., 2000). These factors include:

- participation in vocational education or career development classes at the junior and senior level;
- participation in paid work experience;

- competence in basic academic skills, money management, getting along with others, and self-determination/self-advocacy skills.

This program was piloted in seven schools in 1990 and is now operating in 80% of all high schools in the Oregon. YTP serves students with disabilities who need support beyond the traditional educational and vocational programs offered in their high schools in order to complete their high school program and transition to employment or postsecondary education. They have additional barriers to achieving these goals, (i.e., negative job experience, parenting responsibilities, and unstable living situations).

A three-member team consisting of a special education teacher/coordinator, a transition specialist, and a rehabilitation counselor from the rehabilitation agency implemented the YTP Program. This team provided services to students during the last two years of high school and two years beyond if necessary. YTP students received transition planning focused on post-school goals and self-determination; instruction in academic, vocational, independent living, and personal-social skills; paid job training while in the program and help in securing employment beyond high school; and follow-up support services for up 2 years beyond high school completion.

An independent evaluation conducted by the U.S. Department of Education (Horne and Hubbard, 1995; Rogers, Hubbard, Charmer, Fraser, and Horne, 1995) reported these major findings:
- 90% of YTP students receive a high school completion document.
- 82% secured a competitive job, postsecondary education or some combination at their program exit.
- YTP completers maintained a rate of employment or education consistently above 80% for 2 years after the program.

Based on these findings it appears that when transition programs include instruction on career development, basic academic skills, self-determination and self-advocacy skills, and participation in paid work experiences, that students with disabilities who are at-risk of dropping out can successfully complete their high school education, secure competitive employment and participate in postsecondary education and training. A critical component of the YTP program is the continued support two years beyond high school which is often the time that these students find most difficult to navigate and negotiate successfully their life challenges.

(2) Bridges ... From School To Work. The Bridges Program was developed by the Marriott Foundation for People with Disabilities and operated in Maryland, Virginia, Washington, DC, Los Angeles, San Francisco, Atlanta, and Chicago. The Bridges program provides an intensive vocational intervention for

students with disabilities during their last year prior to school exit and consists of three phases: "(a) the pre-vocational orientation program, during which students and their families are introduced to Bridges and initial vocational goal-setting activities are conducted (two to three weeks); (b) pre-vocational preparation, consisting of individual or group career guidance, job preparation, and job search skills training (two to four weeks); and (c) internship placement and support, which includes specific skills training, monitoring of students' work performance, and other activities in support of the employer/employee relationship" (Luecking & Fabian, 2000, p. 207). The internship is a paid work experience that lasts a minimum of 12 consecutive weeks, and can be continued if the employer and the student both agree to convert the internship to a competitive job placement.

Data were collected on over 3,024 special education students during the program and at three designated follow-up intervals (6 months, 12 months and 18 months after program completion). Students enrolled were 81% minority, 53% male, and 79% were categorized as having mild or moderate disabilities. Results of the six-month follow-up interval indicated that 68% of those contacted were employed. Enrollment in postsecondary education was the most frequently cited reason for not working (43%). At the 12 month interval, 53% of the students were employed and at 18 month follow-up interval, 60% reported that they were employed. Minority participants with emotional disturbance were the least likely to be working at the 18-month follow-up interval (Luecking & Fabian, 2000).

(3) The Great Oaks Job Training Coordinator's Program in Ohio. The Great Oaks program provides employability counseling, job clubs, job development/placement, on-the-job training and follow-along services that spans the last year of high school and the first year of work. During the initial evaluation of the program, a pre-test/post-test control group design was used to determine the effects of extended transition services beyond graduation on employment outcomes. Wage record earnings data from the Ohio Bureau of Employment Services were collected on youth in both the experimental and control groups. The wage data of the groups were compared for the two years following program completion, defined as the termination of extended transition services for youth in the experimental group, and graduation for the control group. On average, youth who received extended transition services earned approximately $3,000 more per year than peers who did not receive these services (Izzo et al., 2000).

Follow-up data were also collected from participants' parents 4 to 6 years following termination of services. A response rate of 48% (n = 30) from the experimental group and 47% (n = 17) from the control group was obtained. Youth in the experimental group were significantly more likely to be employed or in a training program than were youth in a control group. Also, the experi-

mental group participants were more likely to be active in social groups and have savings accounts and credit cards. Although the intervention program did not focus on community integration other than within employment settings, improving employment outcomes appeared to impact the level of involvement that persons with disabilities had in their communities (Izzo et al., 2000).

(4) Teaching All Students Skills for Employment and Life (TASSEL). The TASSEL model consists of student-centered transition planning supported by assessment of student abilities and interests, interagency collaboration, and appropriate school and work-based experiences that are designed to meet the postsecondary goals (Aspel, Bettis, Test, & Wood, 1998). Students select one of two options: an academic course of study or an occupational course of study. Students enrolled in the academic course of study are enrolled in general education courses taught by content area teachers and one Curriculum and Instruction class taught by special education teachers. Students in the academic course of study who plan to enroll in a postsecondary education program are provided assistance in arranging college campus tours, completing applications for admission and financial aid and career counseling by a Transition Coordinator, Vocational Rehabilitation Counselor, and/or the school guidance counselor. Students enrolled in the occupational course of study complete 25 units of credit that consists of on-campus vocational training (minimum of 120 hours), off-campus vocational training (minimum of 120 hours), paid employment (minimum of 300 hours in senior year), and the completion of a job placement portfolio containing all required documentation of curricular competencies. During the on-campus vocational training component students receive incentive pay through Vocational Rehabilitation Work Adjustment Funds and the Carl Perkins funds.

Student outcome data was collected for students who left school in 1995, 1996, and 1997. Follow-up data was collected at 6 months, 18 months and 30 months. In terms of employment, 74% were employed 30 months after leaving school and the majority of these young adults were employed in full-time jobs. Of the students who enrolled in postsecondary education, the majority were very satisfied with their services (Aspel et al., 1998).

COMMON CHARACTERISTICS OF MODEL PROGRAMS THAT PRODUCE IMPROVED OUTCOMES

Why did these programs receive significantly improved employment outcomes, as compared to the National Longitudinal Transition Study findings? Essential characteristics included:

- a coordinated assessment and planning process that involved both school and agency personnel,

- a self-determination and career development process that included school and work-based instruction that provided many opportunities for students to choose jobs that match interests and abilities.

- work-based training that was delivered in both school and community employment settings,

- follow-up services and data collection, and pooled resources/shared funding of critical program components.

Three of the programs also provided extended transition services following graduation. Through the coordinated assessment and planning process, education and rehabilitation personnel worked together to collect and use both vocational evaluation and situational assessment data to coordinate services and supports. Based on the results of assessment data, work-based training – delivered through either vocational courses or community-based work experiences – provided students with direct instruction on the skills, attitudes and behaviors needed to be successful entry level workers. Finally, each of the programs were accountable for an outcome. Follow-up data were collected on youth exiting the programs, and when needed, extended transition services were provided to link young adults to needed services and supports. Programs that deliver comprehensive transition services that are funded by both school and adult service agencies obtain improved post-school outcomes.

The models described above teach self-determination, career development and transition skills that resulted in improved employment outcomes. Although students who have the self-determination skills to pursue a self-directed future are more likely to be successful, other services such as paid work experience, job training, job placement and follow-along supports – which are integral parts of these model programs – have been proven to improve employment outcomes as well. By replicating programs that obtain improved employment outcomes and implementing the emerging practices and suggestions, educators can empower students to gain the skills they need to navigate adult life. The next section of the paper provides suggestions for the field to consider in rethinking and expanding the role of the secondary special educator so professionals can assure that students gain the essential skills needed to navigate adult life.

RETHINKING AND EXPANDING THE ROLE OF THE SECONDARY SPECIAL EDUCATOR

Traditionally, secondary special educators embrace their role of teaching and supporting students through high school by assuring that they gain the credits necessary to graduate, with limited attention to the development of students' self-determination and career planning skills. Special educators spend time teaching aca-

demics and/or assisting general education teachers in modifying curricula, creating alternative assessments, and renegotiating assignments so students with disabilities can earn credit towards their diploma. While the efforts of special educators do assist students with disabilities in acquiring their high school diploma, does this diploma assure that students are prepared to become independent, responsible young adults? Hitchings et al., (2001) indicate that some of the inordinate amount of time that secondary special education teachers spend on academic remediation of students with disabilities could be spent on facilitating their career exploration and preparation activities.

Benz, Lindstrom, and Yovanoff (2000) agree that special educators need to expand their role by focusing on post-school preparation and promoting student self-determination through student-centered transition planning, career exploration, and paid work experiences. Special educators need to operate as change agents to reform high school programs to include career development, work-based learning experiences, and transition planning as integral parts of general education curriculum for all students. More specifically, special educators need to restructure their role from one of writing IEPs and remediating academic skills to providing systematic instruction on self-determination and creating opportunities for applied practice with career development activities. Eisenmann (2001) reports that career-oriented high schools have a positive impact on students' self-determination and career planning, as evidenced by increased motivation, persistence and decision making among students enrolled in these career-oriented high schools.

However, expanding the role of the special educator to include the development of students' self-determination skills may prove to be more challenging than it seems. Wehmeyer, Agran, and Hughes (2000) conducted a national survey to identify if and how teachers promoted the development of self-determination and student-directed learning. Their findings suggested that 60% of secondary special education teachers are familiar with the concept of self-determination and between 90% and 98% indicated that providing instruction in elements of self-determination were either "moderately important' or "very important". Teachers also indicated that the development of self-determination skills in students would be "very helpful" to prepare students for transition to adult life. In spite of these findings, however, only a small number of teachers have moved beyond stating the importance of promoting student self-determination to the implementation of strategies that promote the development of these skills. In further analysis of their data Wehmeyer et al. (2000) found that only 22% of teachers reported that all of their students had self-determination skills included in their IEP, and 31% of teachers reported that no self-determination skills were included in their students' IEPs. Clearly, more training and education on the significance of teaching self-determination skills needs to be addressed in teacher training and professional development programs.

Nine suggestions are presented to shift the focus of education from fostering dependence to encouraging self-determined independence that results in improved post-school outcomes for youth with disabilities:

(1) empower parents as partners in promoting self-determination and career development skills,
(2) facilitate student-centered IEP meetings and self-directed learning models,
(3) increase students' awareness of their disability and needed accommodations,
(4) offer credit-bearing classes in self-determination and careers,
(5) develop self-advocacy skills and support student application,
(6) infuse self-determination and career development skills into the general curricula,
(7) teach students to use assistive technology to enhance their ability to become independent learners,
(8) develop and implement vocational and/or work-based learning programs for all students, and
(9) extend transition services beyond high school graduation to assure that students are linked to either postsecondary education and/or employment.

Suggestions for how to implement these nine strategies are presented in the following section.

(1) Empower Parents as Partners in Promoting Self-Determination and Career Development skills. Parent involvement in transition planning has been cited as a critical component of transition planning (Kohler, 1993; Hanley-Maxwell, Pogoloff, & Whitney-Thomas, 1998; Izzo, 1987; Wehmeyer, Morningstar & Husted, 1999). Hanley-Maxwell et al. (1998) reported that parents often remain passive participants in transition planning, an unfortunate situation given that family members know the student's interests, preferences and instructional needs and will likely be the student's primary support provider after graduation. Cutler (1993) stated that professionals may not believe that parents are capable of teaching their children, although parents have most probably taught their children more skills than any other person, including teachers. Students themselves reported that their families were instrumental in influencing their career and job choices and they expected their families' ongoing support in helping them find jobs (Morningstar, 1997).

Given that a high level of self-determination is associated with positive post-school outcomes, parents need to encourage and support their child's acquisition of self-determination skills. As stated by Wehmeyer et al (1999 p. 40), "Families can create a supportive environment in which students can test abilities and limitations. They can help their child develop positive work habits and behaviors, self-determination skills and the self-confidence to succeed." Davis and Wehmeyer

provided (as cited in Wehmeyer et al. 1999) a number of suggestions that parents can implement to promote independence and self-determination among their children, including modeling self-worth, self-confidence and self-determination; don't leave choice-making opportunities to chance; recognize the process of reaching goals instead of just emphasizing outcomes; provide honest, positive feedback; and allow your child to take responsibility for his own actions, both successes and failures.

In addition, Defur, Todd-Allen and Getzel (2001) reported that parents want professionals to engage in relationship building activities on a personal level, not a bureaucratic level, to engage them as partners in transition planning for their children. Parents identified the lack of respect for their contributions and frustration with a system that treats them as less than equal. Professionals who "communicate, collaborate, connect, care, and celebrate with families throughout this complex time … can promote active parent participation in the transition planning process" (p. 30). As Defur et al. stated, "the cycle of empowerment or disempowerment may be well established based on a long history of participation in the system. Changing the cycle to improve parental involvement in these instances will take perseverance and dynamic relational interactions with individual families to regain lost trust. The power and responsibility to initiate a change in this cycle lies with the professional more so than with the family" (p. 34).

One significant approach that has been reported to increase student self-determination and parent satisfaction with the IEP process is to prepare students to lead their own conference (Countryman & Schroeder, 1996, Martin, Huber Marshall, Maxon & Jerman, 1996). Countryman & Schroeder (1996) reported that student-led conferences provided family members with a better understanding of the student's capacities and interests than teacher-led conferences. Several parents felt that their students provided a more honest report of the their performance. Transition services need to build on the positive traits and characteristics of the student, instead of the deficits approach that still drives the IEP process in many schools. Both parents and students need to be informed and prepared to participate in student-led conferences in meaningful ways.

> By high school, students should play a major role in determining their class schedule and be an active participant in writing the goals and objectives for their IEP.

(2) Facilitate Student-Centered IEP Meetings and Self-Directed Learning Models. The IEP/transition process can be used to guide students in practicing their self-determination skills. During the IEP process, the IEP team should assess the students' abilities to: facilitate and participate in their IEP/transition meetings; articulate their academic and social strengths, challenges, and needs; outline strategies to advocate for the accommodations they need to be successful; and express their career interests and abilities and a plan to gain the skills needed to enter their post-school settings. Throughout the career planning process, team members need to monitor that students' career/employment plans are based on their interests, aptitudes, and abilities. At the high school level, special/general education teachers and parents need to continually assess and support students with disabili-

ties growth in self-efficacy and self-confidence. IEP/transition goals should include goals to improve the self-determination skills necessary to strengthen students' responsibility and independence.

In order for students with disabilities to become the facilitators of their IEPs, they need to start attending and participating in them by late elementary/middle school. They can begin by attending the IEP and sharing with the committee how their school year is progressing, sharing their successes and difficulties, and suggesting supports they think would be beneficial. Next, students should identify the IEP committee members with the support of their special education teachers. Special educators can assist students outline the goals they want to achieve, the steps to achieving these goals, and their desired annual and post-school outcomes. By high school, they should play a major role in determining their class schedule and be an active participant in writing the goals and objectives for their IEP. Throughout their four years of high school they should gradually take more responsibility to lead the discussion at these meetings on their academic progress, their transition goals and what supports they need to succeed. The role of the committee members is to listen to the student and ask guiding questions that facilitate their independence, responsibility, and accountability for their plans.

Wehmeyer, Palmer, Agran, Mithaug, and Martin (2000) expand upon student involvement in the IEP meeting and suggest implementing a student-directed instructional program. They acknowledge that the promotion of student self-determination is a complex process that requires the student's participation in a variety of activities throughout their educational experience. These activities must include focused instruction in problem-solving, goal setting, decision making and self-advocacy, as well as authentic opportunities to conduct their IEP/transition planning meetings and to develop their class schedule so they have the opportunity to practice these skills. According to these authors, the development of these skills is possible when practitioners shift from a teacher-directed instructional model to a student-directed teaching model. They have developed and studied a promising model "The Self-Directed Learning Model of Instruction" to assist students with disabilities in planning and directing their own learning. The model consists of a problem-based approach that utilizes a three-phase instructional process: (1) What is my goal?, (2) What is my plan?, and (3) What have I learned? The results of the study indicate that the majority of students with disabilities have the capacity to manage their learning and enhance their self-determination skills. According to Wehmeyer, et al. (2000), "The model provides a means of getting students actively involved in the totality of their educational program and, presumably, will promote a greater commitment to that program by the student" (p.450). One teacher in this study reported, "The students are very capable of setting their own goals and achieving them. The goals mean a lot more when they set them themselves" (p. 450).

(3) Increase Student's Awareness of their Disability and Related Accommodations. In order for students with disabilities to eventually lead their IEP and to be able to access accommodations in postsecondary education and the workplace, they need to learn about their disability, their strengths, their challenges, and the accommodations and supports necessary for their success. There are several steps in developing this awareness. High school students with disabilities need to review their psychological reports and testing results with the school psychologist and/or special educator so that they can gain an understanding of their strengths and challenges in the learning process. Traditionally, students are tested without ever knowing the results, which perpetuates a chronic state of anxiety and confusion about their performance and capabilities. Next, they need to review their IEP papers in order to understand how this document is intended to identify a plan of support services and goals to address their needs.

Additional activities that can be implemented to heighten disability awareness include reading information about their specific disability and reading about other people with similar disabilities and their successes and challenges. Participating in panel discussions with teachers, community members, and older students with disabilities can help them realize that many people have the same challenges in learning as they have. These interactions can increase their understanding and acceptance about the ways in which they learn and provide them with a sense of optimism for their future. By equipping students with knowledge of their disability at the high school level or earlier, students will be better able to transition to college life and communicate their needs with their college instructors (Lock & Layton, 2001). Several school districts have developed a class to teach self-determination and career development skills. These are described below.

(4) Offer Credit-Bearing Classes on Self-Determination and Career Development. Classes that focus on the development of self-determination and career decision- making can benefit all high school students as they prepare to transition to adult life, especially those students with disabilities. Thus, the creation of a class to teach these skills is an ideal place to launch school improvement initiatives on student responsibility and career planning. Two types self-determination classes have emerged in Colorado and Michigan that both have similar features: The Learning and Education About Disabilities (LEAD) class is taught in Colorado, and the Self-Determination Class that is taught in Michigan.

LEAD Class in Colorado.
LEAD is an exemplary self-advocacy class implemented in a high school in Colorado (Pocock, Lambros, Karvanen, Wood, Test, Browder, Algozzine, Martin, 2002). The class is offered as a credit bearing elective and co-taught by a counselor and special education teacher. The class uses a number of research-supported practices developed to promote self-awareness and disability knowledge, which provide students with a foundation to self-advocate with their high school teachers. A unique feature of this class is student empowerment and lead-

ership. Four class members are elected officers and designated to meet weekly with the co-teachers to determine the weekly classroom activities. The weekly activities include two days of educational activities related to knowledge of disabilities, one day of mentoring on self-advocacy, and a support group activity led by the counselor. The self-advocacy activities include the development student-designed presentations for faculty, parents, students, preservice special education teachers, and community organization.

Self-determination class in Michigan.
Two secondary special education teachers piloted a class with a small group of students with disabilities in 1996 to teach the self-determination skills necessary to succeed in high school, college, and the workplace. The class focused on five critical goals of self-determination and career planning:

(1) Nurture students' independence and strengthen their self-advocacy by expecting them to actively participate in their IEP/Transition meetings with the intent of having them ultimately plan and conduct their own meetings.

(2) Develop opportunities for students to learn about their disability, strengths, challenges, and the supports necessary for their success in school and the workplace.

(3) Strengthen students' sense of internal locus of control so they begin to see themselves as causal agents in the outcomes of events, rather than passive recipients of the actions of others.

(4) Promote the development of students' self-advocacy skills by expecting them to know and ask for what they need in an appropriate manner.

(5) Provide students an opportunity to complete a career assessment and develop career exploration goals and activities.

At the conclusion, interviews were conducted with the 11 students and 7 secondary teachers who had these students in their academic classes. The interviews revealed that the students were more aware of how they learn and the accommodations they needed to succeed (Holub, Lamb, & Bang, 1998). One student reported, "I learned more about my disability personally, and I understand more about how it is affecting my grades and my attitude. When I am aware of my disability, I become frustrated. But this class has helped me to be more relaxed and comfortable. When I look at my report card I feel proud of what I have accomplished" (p.192). Students also reported after their career exploration activities a greater understanding of their strengths and limitations in the workplace, a stronger career focus, and a greater sense of their responsibility for their future. All seven of the teachers agreed that it is extremely important that students share

In a follow-up interview after high school graduation, this student reported, "If I have any set of skills that matters to me it's these [advocacy skills]. I know who I am, where I want to be, and how to get there."

the accommodations they need. Two dominant themes of the teachers' responses were that (1) "the students in the self-determination class became more aware of their strengths and weaknesses as learners and more confident in sharing their needs and problems," and (2) "all high school students need to become self-determined and learn how to self advocate," (p.192).

Similar outcomes were reported from a study of a self-determination class piloted at an urban high school in Madison, Wisconsin. One major school improvement goal was to include students with disabilities in general education classes. To prepare students for their inclusion, a ninth-grade course in self-determination was developed. One student reported in her post class interview, "It wasn't easy for me to talk about my disability. The teachers and my mom had always whispered when they talked. It was like some dirty secret. Then all of a sudden my teacher wanted me to talk about it. They had me reading my IEPs …to tell you the truth, I thought the whole idea [was bad]" (Holub, Lamb & Bang, 1998, p. 203)." In a follow-up interview after high school graduation, this same student reported, "If I have any set of skills that matters to me it's these [advocacy skills]. I know who I am, where I want to be, and how to get there" (p. 203).

Ideally these skills are best developed in a class on self-determination or in a resource room in which students with disabilities can engage in activities towards this end with the support of their peers and professionals in the earlier grades. However, their development will need to continue on an individual basis through strategic interactions between educators and students, and/or infused into general education classrooms. Over the last decade many materials and curricula have been developed to teach and promote self-determination skills (Agran, 1997; Algozzine, et al., 2001; Field, Martin, Miller, Ward & Wehmeyer, 1998; Wehmeyer, Agran, & Hughes, 1998; Serna, & Lau-Smith, 1995). Many of these products seek to supplement career, academic, social or life skill training activities. Given the newness of these self-determination curricula, few of these products have been experimentally tested; therefore, little research has been reported on the effects of the curricula (Eisenmann, 2001).

The development of self-determination and self-advocacy skills will be greatly enhanced if both educators and parents develop them in partnership. District sponsored workshops for teachers and parents on transition and self-determination are one way to encourage these types of partnerships.

(5) Teach Self-Advocacy Skills and Support Students' Advocating for their own Accommodations. It is critical that students with disabilities develop an awareness of their disability, what learning strategies help them learn, and what accommodations and assistive technology devices may help them compensate for their disability. Once students understand their personal learning style and needed accommodations, special educators can provide them with opportunities to self-advocate with their general education teachers. Having a conversation with a

teacher about their difficulties in learning can create anxiety for many students with disabilities. Thus, several steps are necessary to prepare them for this conversation. A first step for the student is to write a personal self-advocacy plan describing their disability, their strengths and challenges as a student, the type of teaching style or classroom activities they find helpful, and the accommodations including assistive technologies that are necessary for them to be successful. They also need to outline their responsibility as a student, as this reinforces the development of internal locus of control. Through the process of writing a self-advocacy plan, students think about their needs as a learner as well as the responsibility they must take to be successful. This plan also provides students with a script to use with their teachers.

Students with disabilities will need to practice sharing their plans before they make an appointment with their classroom teacher. They can engage in role-play and discuss various options of discussing their self-advocacy plans with teachers. Students can compare a passive, soft-spoken, timid approach versus a loud, demanding aggressive approach. Since neither of these approaches is very effective in achieving their goal of communicating their needs as a learner to their teachers, the student will have to learn that the most effective method of advocacy is a polite but assertive one, i.e., introducing yourself, stating your needs, sharing what you do to accommodate your disability, and requesting accommodations that the teacher can do in a strong but pleasant tone (Rumrill, Palmer, Roessler, & Brown, 1999). Students can begin practicing their self-advocacy skills by sharing their written plan with a peer, then with a small group of peers, and then with their parents and special education teacher. These alternatives give them several opportunities to become comfortable with the process. If they have several teachers to meet with and share their self-advocacy plan, it is helpful if they select the teacher with whom they feel most comfortable. In some instances, students with disabilities are so anxious about taking the first step that the special education teacher may need to attend their first appointment for support and guidance.

(6) Infuse Self-Determination and Career Development Skills into the General Curricula. Self-determination and career development instruction has been successfully integrated into the general education curricula in over 20 school districts across three states. Through a federal demonstration grant, 20 inclusive teams piloted a self-determination and transition curricula called NEXT S.T.E.P. The NEXT S.T.E.P. curriculum has been designed to provide guided practice for students to set goals, implement plans to meet their self-directed goals, evaluate their actions and adjust their goals, as needed. Numerous goals and activities are suggested to assist students gain skills to enhance their transition from school to adult life. This curriculum helps students learn how to take charge of their own transition planning process. As students progress through the curriculum they:
- learn about the nature and purpose of transition planning,
- participate in self-exploration and self-evaluation activities,

- develop and implement their own transition plans, and
- present their transition plans through power point presentations to others in an individualized transition planning meeting.

The NEXT S.T.E.P. curriculum has been infused into inclusive classrooms such as English, career classes, information technology or applied sciences classes. Students' take career inventories and personality assessments and complete self-directed assignments related to transition (e.g. completing a writing assignment about careers and/or selecting a college).   Two English teachers commented, one from general education and one from special education, respectively:

> "We had students write a five-paragraph paper in which they described the goals they developed in NEXT S.T.E.P. and how they were going to complete their goals. This assignment was incorporated as one of our assignments for English" (Doren, Crawford, Blood, & Izzo, 2001, p. 13).

> "We really tried to tie the content of NEXT S.T.E.P. with the content we were doing in our English class. Lesson 4 of the curriculum suggests students write a paragraph about their hopes and dreams and how their hopes and dreams influence their future plans. We used this writing activity to satisfy one of our English assignments" (Doren et al., 2001, p. 13).

The final activity that many teachers required students to complete was to summarize their vision for the future, strengths, challenges, and actual plans to reach their vision through a PowerPoint presentation. These presentations were presented to their peers and/or presented at their IEP meeting. Many youth disclosed that their disability was a challenge and outlined strategies to compensate for their learning differences. Since we all have strengths and challenges, all students outlined their personal plans regardless of whether they had a disability or not. Many of the students shared goals they accomplished during the current year, as well as their plans for the upcoming school year. Through the development and accomplishment of their personal self-selected goals, these students demonstrated that they could reach their goals with careful planning and support from their teachers, peers and parents. Both general and special education teachers have seen improvements in the abilities of both students with and without disabilities to set a goal, develop a plan, and meet their goals and objectives.

(7) Teach Students to Use Assistive Technology to Enhance their Ability to Become Independent Learners. According to Burgstahler, (2002), access to electronic and information technologies can assist students with disabilities gain the skills they require to become independent learners in secondary education, postsecondary education and employment. Yet there are many challenges to assuring that students with disabilities gain access to the appropriate technology that promotes movement to adult settings. Four challenges identified by Burgstahler (2002) include: (1) gaining access to and funding the appropriate technology, (2) learning to use the technology, (3) maintaining the technology as a student trans-

fers from secondary education to postsecondary education and/or employment, (4) achieving the right balance between universal design of learning, as managed by the teacher, and the use of technology, as managed by the learner. Persons with disabilities identify the two biggest barriers to be lack of information and knowledge about appropriate assistive technology and lack of funding to purchase assistive technology (National Council on Disability, 2000). Students with disabilities who gain access to the appropriate technology have increased opportunities for self-advocacy and self-determination. For example, a student who is blind can use speech output technology to fully participate in a distance education course or a student who has no use of his hands can independently operate a computer to draft and edit articles in a journalism internship.

(8) Develop and Implement Vocational and Work-Based Learning for All Students. Work-based learning provides a structured opportunity for students to observe and use academic skills within a worksite. Work-based learning benefits students, teachers and employers. Students' benefit by experiencing increased opportunities for integrated, hands-on, work-related learning in academic instruction. These work-based learning experiences often result in increased motivation to learn academic subjects, an opportunity to reality-test careers so students can make informed career choices, and potential contacts that may broaden employment options (Vocational Instructional Materials Lab (VIML), 1997). Teachers benefit from the opportunity to utilize the professional expertise available at worksites and use it in developing real-world examples that connect academics to work tasks and projects. Employers benefit by having an active role in demonstrating to students the academic competencies needed to be successfully employed at their worksites and providing input that may result in student growth and the production of good citizens.

A number of principles to guide successful school-to- work partnerships have been outlined (VIML, 1997). For example, top worksite and education leaders need to be committed to the program and programs should be coordinated by people with leadership ability who have access to top decision-makers. The desired outcomes of the program should have measurable criteria and be monitored to evaluate, improve upon, and report program outcomes to school officials, teachers, employers and parents. Coordinating worksite experiences for students is a time intensive responsibility, therefore worksite coordinators must have adequate time to match students to appropriate worksites based on student expressed interests. Students need to gain worksite experiences that are based on their interests and abilities to assure that their career goals are validated and they can pursue an education that results in the skills they need to enter appropriate careers.

The Philadelphia's School-to-Careers program reported that students who were involved in work-based learning had higher Grade Point Averages (GPA) than students not involved (www.stw.edu.gov/products, 3/5/99). Seniors in New York's School-to-Work initiative took more advanced science, math and computer

science courses, and maintained comparable grades. School-to-Work programs have reported that attendance rates improve and drop-out rates decrease for all students involved (www.stw.edu.gov/ products, 3/5/99). Overall, school-to-work prepares all students for careers and college.

(9) Extend Transition Services Beyond High School Graduation to Assure that Students are Linked to either Postsecondary Education and/or Employment. Traditionally vocational education programs are required to report employment outcomes for their students after graduation. These data are used to implement a continuous improvement process that results in technical assistance, program improvement, and, at times program elimination. Given that employment outcomes are used to maintain quality programs, the Great Oaks Institute of Technology and Career Development provided a Great Oaks Warranty. This guarantee allows any of their graduates to return to their program for retraining if they did not meet their employers' expectations in guaranteed competency areas during their first year on the job. In 1990 a model demonstration grant was funded to determine the effects of extending transition services beyond graduation on employment outcomes of vocational students with disabilities who graduated from one of over 50 career-training programs offered at the Great Oaks Institute (Izzo et al., 2000).

As described earlier, a pre-test/post-test control group design examined the effects of extending transition services beyond graduation on employment earnings of vocational students with disabilities. Specific transition services included: vocational assessment, agency contacts, Individualized Educational Program meetings, extended vocational training, employability counseling, job club, job interview preparation, job development, and job coaching. The results indicated that youth who received extended transition services had significantly higher earning for two years following the termination of services than youth who did not receive extended transition services. Through a follow-up survey conducted five years after intervention services ended, we found that youth who received extended transition services were significantly more likely to be employed or in a training program than those without extended transition supports (Izzo et al., 2000). Specifically, self-determination and career development skills were enhanced through the employability counseling, job club and job development components of the program. As students were taught how to market their strengths, match their interests and strengths to potential job openings, and then provided with support as the students called employers, scheduled interviews and then attended these interviews, their self-esteem and confidence grew.

Implications

One of the primary purposes of IDEA of 1997 is to "ensure that all children with disabilities have available to them a free and appropriate public education that em-

phasizes special education and related services designed to meet their unique needs and prepare them for employment an independent living" (34 CFR 300.1(a)). By delivering an education program that promotes the development of self-determination and career-decision making skills, students will be able to advocate for the accommodations and supports they will need to gain access to postsecondary education and/or employment with a higher probability of success. However, if students do not gain self-determination skills in high school, postsecondary disability personnel must be prepared to assist students in gaining these skills within the college setting.

While the development of self-advocacy skills ideally should begin at the secondary level, many students with disabilities enter college with little or no experience in requesting the accommodations they need for academic success. Even though postsecondary support services for students with disabilities are increasingly more available, at some institutions comprehensive services do not exist. These services have evolved from service providers' assessment of students' needs, rather than from empirical evidence (Bursuck, Rose, Cowen & Yahaya, 1989; Sergent, Carter, Sedlacek & Scales, 1988; Shaw, McGuire & Brinckerhoff, 1994; Gajar, 1992). The Association of Higher Education and Disability (AHEAD) addressed the need for program standards in disability services by conducting a survey of eight hundred disability service providers that asked them to identify the services they deemed essential to provide equal educational access for students with disabilities in postsecondary education. From the results of this survey, twenty-seven essential services emerged in nine different categories and were developed into the AHEAD Program Standards (Shaw & Dukes III, 2001). A number of these services directly relate to the role of the postsecondary disability personnel in promoting the success of students with disabilities in postsecondary education. For example, Program Standard #6 states: "Assist students with disabilities to assume the role of self-advocate."

(1) Teach Postsecondary Students With Disabilities to Self-Advocate and Coordinate their Accommodations and Supports with Faculty

Under the Americans with Disabilities Act (1990) it is the student's responsibility to identify their disability and request accommodations in postsecondary education. Therefore it is imperative that they continue to develop skills in self- advocacy. However, just as students with disabilities need direct instruction in effective learning strategies, they also need instruction and modeling in self-advocacy. The disabilities counselor is in the best position to facilitate this development through individual consultation and/or in a class such as College Self-Determination offered through the Office for Students with Disabilities (OSD).   The interactions between the student and the disabilities counselor need to promote student independence and responsibility and validate students' efforts at self-determination. While it is primarily the responsibility of students with disabilities to advocate for

themselves, the institution has responsibility to advocate for access and support for students with disabilities admitted to the college.

Some colleges and universities teach courses to assist students develop self-advocacy skills. Two examples of experimental classes focusing on empowering students with disabilities to become stronger advocates for themselves have been implemented and studied in postsecondary settings. Bridges is a transition class that is a project funded by the National Science Foundation. The purpose of the class is to connect and support students with disabilities who have career interests in science, technology, engineering, and mathematics. By enrolling these students in a "College Success Class" project staff assist students with disabilities in developing self-determination/self-advocacy skills (Lamb, 2002). The class is a one-semester course held once a week for two hours and co-taught by a college disabilities counselor and a transition specialist. Students are required to meet three times with the instructors as a follow-up during the spring semester. Nine students with disabilities completed the course and the follow-up visits. Seven of the nine students reported feeling more confident in talking with the instructors about their disability and accommodations. All nine of the students met with one or more of their instructors during the spring semester. All nine of the students would recommend such a class to incoming freshmen, and in general reported that the course and the second semester support meetings "helped me quite a bit and I would recommend it to other students" (Lamb, 2002).

Similarly, a class on Student Leadership was taught in Midwestern University for the purpose of helping students with disabilities find their voice. A course entitled, "Disability Policy: Leadership for the 21st Century" was offered at a university in the Midwest for students with disabilities. The course was funded by a grant from the Office of Special Education and Rehabilitative Services (OSERS). Twenty-two students with disabilities enrolled in the two-credit course in the Spring of 1999. One of the major goals of the course was to facilitate the development of self and group advocacy skills and systems change. One requirement was that students serve on one of the three ADA Task Forces on the campus: recruitment/retention, access/accommodation; or campus life. Students developed an impact plan related to contribution to their specific ADA Task Force. A second requirement of the course was to maintain a weekly journal that the course instructor provided feedback on a weekly basis. Journal topics included such topics as the disabilities movement, disabilities issues, leadership skills, and self-determination/self-advocacy. In a comprehensive analysis of the students' journals, two major themes emerged related to students' self-determination/self-advocacy. The first theme centered on the desire to learn about disability issues and their rights and responsibilities from each other. The second theme centered on the opportunity to develop and practice their self-advocacy skills (Webster, 2001). Several major policy changes were implemented based on students' impact plans. Two campus-wide policy changes that this class impacted were: (1) the bus schedule was changed for students with disabilities so they could attend activities

on Sunday afternoons, and (2) meetings were scheduled with the President of the University and members of the ADA Task Force on a consistent basis to address disability issues.

In sum, though both of these courses were implemented as a pilot study with a small number of college students with disabilities, the student outcomes were positive. The voices of the students themselves give credence to the fact that there is a strong need for the continued development of self-determination/self-advocacy skills in the postsecondary settings.

(2) Assist Students in Developing the Learning Strategies necessary to be Successful Independent Learners

Another of AHEAD's Program Standards states that the disability personnel need to "advocate for instruction in learning strategies" (Shaw & Dukes III, 2001). Not only are students with disabilities faced with the radical changes in the laws that govern support services once they enter college (IDEA vs. ADA), they also face a radically different learning environment in college. The pace of instruction is accelerated, the size of the class is often larger, and there is a much greater expectation of independent learning (homework) in the college setting. Therefore, students with disabilities need assistance in developing skills in organization, time management, memory, writing, and test taking. Deshler, Ellis and Lenz (1996) have documented the effectiveness of direct instruction in learning strategies for students with learning disabilities, which are applicable to students with ADHD, hearing impairment, speech and language disabilities. The OSD personnel are in the best position to advocate at the institutional level for the development of this type of course for students with disabilities, as well as any college student experiencing limited success.

Many books exist to assist delivery of these types of learning strategy courses. For example, Keys to Effective Learning (Carter, Bishop & Kravits, 2000), Learning and Self-determination Strategies for Achievement in College (Tuckman, Arby & Smith, 2000), and Becoming the Master Student (Ellis, 2000), are only a few of the instructor manuals and student books available to motivate and teach students the most common learning strategies.

Lock and Layton (2001) assisted a group of college students with learning disabilities to develop self-advocacy plans, detailing their learning characteristics and necessary accommodations. These plans were used as a guide for discussing their disability and accommodations with their college instructors. They conducted informal interviews with the students and their instructors about the value of these plans. The majority of students reported that they gained a greater understanding of their disability and the accommodations they need to be successful. Their instructors reported similar findings about the types of accommodations that students with disabilities need in a college setting.

(3) Link Students with Appropriate Assistive Technology

According to Burgstahler (2002), access to technology can assist students with a wide range of disabilities in succeeding in postsecondary education and has the possibility of creating more independent and self-determined learners. In the last decade assistive technologies have been developed to assist people with difficulties in reading, writing, concept mapping, and organization. These technologies serve to enhance the learning of all students, but are essential for the success of students with disabilities in postsecondary settings. However, the two major barriers to linking students with disabilities to assistive technology are professionals' lack of information and knowledge about appropriate assistive technology and limited funding to purchase these technologies (National Council on Disability, 2000; National Center for the Study of Disability Supports, 2001). The postsecondary disability personnel can learn about these technologies on-line through the various websites such as http://www.closingthegap.com Further, they can advocate at the institutional level for the purchase of these technologies and provide access to them in the student technology labs. Training in the various assistive technologies could be incorporated into a Learning Strategies or College Success class or through peer tutoring programs in the technology labs.

(4) Recruit Department Liaisons To Assist In Clarifying Roles And Responsibilities Of Faculty, Disability Service Providers, And Students With Disabilities About Classroom Accommodations And Supports

As Linda Schoen, Disability Services Liaison to the Psychology Department at a large Midwestern university stated:

> "It's important to have one person who acts as the central resource between the department and the Office for Disability Services. That way there's one person who's collecting information …… and there's also one person who can be that resource person for the faculty….. To create a liaison in a department, I think it's important that the person has both good working relationships with the students so they understand what the student is experiencing within their department and also good relationships with the faculty" (Izzo, Kalish, Lissner, Yurcisin, Carlton, & Acker, 2002).

At a large Midwestern university, the Office for Disability Services recruited department liaisons to assist improve the communication among faculty within the department on disability issues. The liaisons have become the first point of contact when faculty have questions about students with disabilities and the types of accommodations that they need. The liaisons can explain the roles and responsibilities of the student with a disability, the faculty, and the disability services provider. Some liaisons have coordinated disability training for new Teaching Associates, who are teaching college level courses for the first time. Students with dis-

abilities also use the liaison as a resource to ask about course requirements and possible accommodations that are in place. For example, in the Psychology 101 course, Teaching Associates recruit notetakers during the first week of class to assure that these accommodations are available when and if they are needed. Department liaisons have assisted faculty in understanding their roles and responsibilities, the student with a disability, and the office for disability services (Izzo et al., 2000).

(5) Assist Faculty To Create A Welcoming Climate In Their Classroom

In a recent satellite teleconference, Dr. John Parson, the Vice-Chair of the Chemistry Department and Disability Services Liaison at the aforementioned university observed, "students are only going to be productive if they feel welcome" (Izzo et al., 2002). One strategy that many colleges and universities implement to create a welcoming climate is to add a disability statement to each course syllabi. As Linda Schoen, Disability Services Liaison to the Psychology Department, said, "the disability statement is important because it is the first invitation that faculty have to students. It says: 'I know you're here. I welcome you. I want my course material to be open and accessible to you.'" (Izzo et al., 2002)

A disability statement is a statement placed on course syllabi indicating a faculty member's willingness to provide reasonable accommodations to a student with a disability. A sample statement that has been suggested is as follows: "Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Office for Disability Services at [insert phone number] in room [add location] to coordinate reasonable accommodations for students with documented disabilities" (www.osu.edu/grants/dpg/fastfact/syllabus.html#statement, retrieved April 28, 2002). Although it is suggested that this statement appear on the course syllabi, many faculty read the statement during the first week of class and invite students with disabilities to meet with them privately to discuss needed accommodations. Together the student and faculty can review the course materials and requirements. They can then discuss the accommodations needed to assure that the student has access to the content and the appropriate evaluation measures to evaluate the learning that has occurred.

(6) Partner with other Offices on Campus that Provide Support to Faculty and Student such as Professional Development Centers, Tutoring Centers, and Career and Employment Centers

Another component of the role of disabilities personnel is to serve as a resource for faculty and students with disabilities to other support services available on campus. All colleges and universities have a number of part time and adjunct faculty that frequently change. Consequently, it is important that disabilities counselor serves as link to professional development centers that provide new and part

time faculty with information on disabilities issues and best practices. They can provide similar services to students with disabilities who need tutoring services and career/employment information.

(7) Link Students with Disabilities to Adult Service Agencies Such As Rehabilitation Services, Mental Health Agencies and One-Stop Career Centers

Disabilities personnel are often in the best position to assist students with disabilities in identifying the appropriate community agencies and services that can address their individual needs. Many college students with disabilities are unaware of the services that community agencies can provide to assist them with social/emotional issues, resources for independent living and employment. In particular students with disabilities may need guidance and support in finding employment after completing their postsecondary education and the disabilities provider is often in the best position to direct them to one-stop career and employment centers for this assistance.

Recommendations

As illustrated by the model programs discussed earlier, increasing opportunities for students with disabilities to make choices so their curricula is relevant and related to their post-school vision is critical to both academic and career success. To assist students in building self-determination in the larger contexts of learning and career development, the roles of educators must be redefined to meet student needs. Building upon the attributes of the model programs and the strategies presented to expand the roles of educators at both secondary and postsecondary levels, the authors suggest a comprehensive series of recommendations that encompass practice, policy, and research domains.

RECOMMENDATIONS FOR PRACTICE

While teachers agree that developing self-determination and career development skills among students is important, very few teachers have incorporated these skills into IEP goals of students with disabilities. One barrier frequently identified by teachers to providing instruction in self-determination was that they did not have sufficient training on promoting these skills (Wehmeyer et al., 2000). Thus, there is a continued need for teachers to learn strategies to teach self-determination and career development through pre-service and in-service education. To strengthen preservice and inservice teacher preparation programs on a secondary level, the first two competencies discussed below need to be integrated into special and general education teacher certification programs. The third and last competency listed needs to be integrated into training of post-secondary service providers:

(1) Integrate training on self-determination and career development into teacher preservice and inservice programs that provides direct instruction on how general and special educators must work with parents, students, administrators and guidance personnel to:

- Focus high school graduation requirements on the acquisition of academic and transition skills that are relevant to the student's self-determined future vision;
- Promote curricular relevance and self-determination through student-centered planning that occurs both within the general education curricula, as well as through individualized career guidance, transition and IEP meetings;
- Expand internships, work-based learning and community-based experiences so teachers can assist students to better match their interests and abilities with the academic skills needed to complete the work requirements of their chosen career;
- Develop collaborative relationships between secondary special education teachers and rehabilitation counselors from community agencies as a mechanism for transition planning and programming;
- Extend secondary school reform efforts to include career development, applied learning in the community, and transition planning as a regular part of general education for all students;
- Include students in transition planning by preparing them to be active partners in their own educational and transition planning; and
- Provide instruction on information literacy and technology so students can connect school and work-based learning through career exploration on the Internet.

(2) Provide training and support for parents and community representatives on self-determination, career development and transition services:

- Coordinate training sessions for parents, students and community representatives that review legislation, rights and responsibilities, program options at the local level (including postsecondary options), and interagency eligibility and program options.
- Schedule individualized meetings with students and parents at the convenience of parents, and compensate educators for their participation through release and/or flex time.
- Base transition services from a student-centered approach that is outcome-oriented and builds on individual student strengths, versus the traditional deficit model of educational planning.

(3) Integrate training on self-determination and career development into rehabilitation and counseling preservice programs and disability services providers' inservice programs so that providers:

- Teach postsecondary students with disabilities to self-advocate and coordinate their accommodations and supports with faculty;
- Promote courses that assist students in developing the learning strategies necessary to be successful independent learners;
- Promote knowledge and access to assistive technology (AT);
- Provide training on AT to students with disabilities;
- Assist faculty in creating a welcoming climate for students with disabilities in the classroom setting;
- Partner with other offices on campus that provide services and support to students and faculty, such as professional development centers, tutoring centers, and career and employment centers; and
- Link students with disabilities to adult service agencies such as rehabilitation services, mental health agencies, and one-stop career centers.

RECOMMENDATIONS FOR POLICY

Federal and state legislation has often been the catalyst to program improvements at the local level. In this spirit, the following policy recommendations are suggested.

1) Increase funding for transition services and assistive technology programs that integrate self-determination, career development and work-based learning into the general curricula and other specialized transition programs.
2) Increase financial incentives for businesses who collaborate with schools to provide work-based learning opportunities for all students.
3) Collect national data on post-school outcomes of all youth, including postsecondary enrollment and retention rates, employment outcomes such as earnings and career advancement, and independent living outcomes.
4) Establish certification programs for transition specialists at the state level that are based on national standards and implemented through local colleges and universities.
5) Encourage postsecondary disability personnel to adhere to the AHEAD Program Standards that include competencies in self-determination, career development and assistive technology.
6) Extend transition services beyond high school graduation that is coordinated with adult service agencies and that provide on-going supports to assure that students gain and maintain employment commensurate with their interests, abilities and skills.
7) Encourage students to access services and supports from other community-based and campus resources, such as career/employment centers, and adult service agencies.

8) Increase funding for transition services for youth delivered by disability services counselors and staff who work at rehabilitation and workforce development agencies.
9) Hold schools accountable for improving the achievement of all students, including students with disabilities, while integrating self-determination, career development and academic skills within the curricula.

RECOMMENDATIONS FOR RESEARCH

(1) Fund research to develop models that teach self-determination/self-advocacy and career development skills through the disability services offices within postsecondary education institutions.
(2) Fund research to develop models of career planning and exploration activities that are jointly offered through college career planning and disability personnel.
(3) Expand and improve instrumentation that measures self-determination and renorm with mild and severe disability groups.
(4) Conduct research on motivation and the self-evaluation of both normally achieving students and students with mild-to-severe disabilities.
(5) Conduct research on differences in the career-decision making process between students with mild and severe disabilities.

Summary

"I would never choose the weaknesses that I have, but without them I would not have the strengths that I have. Learning disabilities are with me for life."

As educators, we must restructure our role to assure that the skills students need to succeed in their chosen post-school environments are indeed highlighted in their IEP, and then taught through both the general education curricula and special education supports. Students' educational program must include content on self-determination, self-advocacy and career development skills. To the extent possible, students themselves need to coordinate the accommodations they need in high school and post-school settings such as college, employment and independent living, acting as their own self-advocates.

In the final analysis, the real test of the value and necessity of fostering self-determination is when professionals and parents take time to hear the voices of young adults with disabilities who have acquired self-advocacy skills and confidence in their abilities. A high school students who was part of an experimental self-determination class wrote in her final reflective journal:

> "I would never choose the weaknesses that I have, but without them I would not have the strengths that I have. Learning disabilities are with me for life. By acknowledging them and accessing the help others offer, I don't have to suffer by the title I have branded myself….'stupid'. I can begin to trust that I am as talented as others" (Holub, Lamb & Bang, 1998, p. 2).

By listening to the voices of youth with disabilities, rethinking our roles as professionals and parents, and by providing them with opportunities to develop the skills of self-determination and exercise their rights to choose throughout their educational process, youth with disabilities will have the essential keys to open the door to success in secondary, postsecondary, and employment settings.

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