



Family assets, postsecondary education, and students with disabilities: Building on progress and overcoming challenges



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ABSTRACT

Students with disabilities are increasingly enrolling and participating in two-year, four-year, and other institutions of higher education. Federal policies and initiatives addressing the educational needs of students and adults with disabilities provided impetus for these increases. For example, mandates within the Individuals with Disabilities Education Act (2004) have resulted in K-12 public schools increasingly preparing students for postsecondary education. Nonetheless, students with disabilities continue to face financial challenges as well as low educational expectations in their pursuit of postsecondary education. Family assets may provide a framework for addressing these challenges and provide specific implications for policy as well as educational practice.

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1. Introduction

The 21st century school is made up of a variety of learners from assorted backgrounds and with numerous learning, behavioral, and social/emotional needs. A segment of these learners is students with disabilities who comprise a significant proportion of students within K-12 education programs. The largest numbers of these students qualify for special education services under the *Individuals with Disabilities Education Act (IDEA, 2004)* (e.g., learning disabilities, intellectual disabilities, communication disorders). In addition, a smaller number of K-12 students with disabilities (e.g., those diagnosed with attention deficit-hyperactivity disorder) qualify for school accommodations and modifications via Section 504 of the Rehabilitation Act (1973). Both laws require student eligibility based on having a diagnosed disability that impacts their lives and/or education. Taken together, students with disabilities are estimated to constitute over 20% of all K-12 students served in U.S. public schools (Newman, Wagner, Cameto, Knokey, & Shaver, 2010).

In part, due to schools' efforts to meet these legal requirements and greater educational support at the K-12 and postsecondary education levels, students with disabilities are increasingly prepared for and participating in postsecondary education (Newman et al., 2010). While students with hearing and vision disabilities are most

likely to participate in postsecondary education (Wagner, Newman, Cameto, Garza, & Levine, 2005), students with learning disabilities are among the fastest growing groups of students participating in some form of postsecondary education (Newman et al., 2010). Though a number of factors contribute to these outcomes, like their typically developing peers, students with disabilities and their families increasingly expect to enroll and participate in postsecondary education.

Despite these increasing enrollment rates, students with disabilities continue to be underrepresented in postsecondary education programs at two-year, four-year, and trade colleges (Wagner et al., 2005). Among students with disabilities, students with cognitive and multiple disabilities (e.g., intellectual disabilities) remain the least likely to enroll in some form of postsecondary education (Wagner et al., 2005). Moreover, students with disabilities from low income and minority backgrounds are even further challenged, having the least participation in postsecondary education (Fleming & Fairweather, 2011).

The importance of a postsecondary education is well recognized for students with and without disabilities. With regard to students without disabilities, according to Carnevale, Rose, and Cheah (2011), individuals with a four-year degree earn 84% more over a lifetime than those with only a high school diploma. This is up from 75% in 1999. Individuals holding a four-year degree can expect median lifetime earnings approaching \$2.3 million compared to \$1.3 for individuals with just a high school diploma. Moreover, research suggests that adults without a disability are more likely to be employed if they have a college degree than if they have a high school diploma. The unemployment rate of individuals 25 years and older with at least a

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four-year degree is consistently about half the unemployment rate for high school graduates (College Board, 2007). The need for postsecondary education to gain employment or to remain employed is only likely to increase in the coming years. Carnevale, Rose, and Cheah (2011) indicate that jobs available for workers with postsecondary education in the U.S. will increase to 63% of all occupations in the U.S. by 2018, up from 28% in 1973.

Regarding students with disabilities, postsecondary education is associated with higher employment rates and higher earning potential (Getzel, Stodden, & Briel, 2001). In the midst of the Great Recession¹ that was characterized in part by high unemployment rates, individuals with disabilities had higher rates of labor market participation when they had some college education (43%) compared to a high school diploma (34%) or less than a high school diploma (21%; Fogg, Harrington, & McMahon, 2010). Individuals with disabilities who had earned bachelor's or graduate degrees had the highest rates of labor market participation, at 53% and 60%, respectively. This suggests that postsecondary education may have played a protective role against the effects of the Great Recession on the employment of individuals with disabilities. Findings indicate that individuals with disabilities who have a four-year college degree or even less than a four-year degree (i.e., some college enrollment without degree completion) have higher employment rates than students with disabilities who have not participated in or graduated from college (Getzel, Stodden, & Briel, 2001). For example, for adults aged 21 to 64 with disabilities, those with bachelor's degrees had a 54% employment rate compared to a 36% employment rate for all adults with disabilities. For adults with disabilities and a high school diploma or equivalent, the employment rate is 33.6% (United States Census Bureau, 2009). Furthermore, individuals with disabilities who graduated from college have similar salaries and employment rates as counterparts without disabilities who graduated from college (Shaw, 2006; Horn & Berkold, 1999). Thus, the value of a college degree in terms of employment and earnings is evident and makes a strong case for adults with disabilities to participate in postsecondary education.

Given that postsecondary education can help individuals obtain employment and higher level occupations, the need for individuals with disabilities to participate in postsecondary education is clear. Consequently, policies and programs to support students with disabilities who enroll in K-12 programs and in postsecondary education institutions are important. Of particular interest are those policies and programs that hold promise to increase the probability of students with disabilities, including those who face the greatest socioeconomic challenges, to participate in postsecondary education. A primary area for policy consideration comes from research that has pointed to the importance of family and educator expectations (Marjoribanks, 1984; Mau, 1995; McKown & Weinstein, 2008). Similarly, a growing body of theory and research emphasizes a positive link between family financial assets and the rates at which students with and without disabilities participate in higher education (Cheatham & Elliott, 2012; Elliott, Destin, & Friedline, 2011).

Rather than looking only at family income, assets research focuses on monetary assets such as savings that families hold over time (Schriener & Sherraden, 2007). The assets–postsecondary education link is well established for the general population of students (Elliott et al., 2011), and research is emerging suggesting similar outcomes for students with disabilities (Cheatham & Elliott, 2012). Considering the recent trends in the increase of students with disabilities applying to and attending two- and four-year postsecondary education institutions, it is increasingly critical to consider family assets and the ways in which families who have historically not considered postsecondary education

as a viable option (e.g., families of individuals with disabilities) plan and save for postsecondary education. Thus, it is incumbent upon researchers and practitioners as well as policy makers to address the assets–postsecondary link for students with disabilities and their families.

The purpose of this paper then is to discuss recent trends regarding postsecondary transition for students with disabilities illustrating remarkable progress. We also present postsecondary outcomes for these students illustrating continuing challenges. Next, we review current scholarship regarding assets for families of students with and without disabilities. Finally, we discuss policy and practice implications for supporting postsecondary outcomes for students with disabilities to illustrate the need for appropriate college planning that includes family assets.

2. Progress in postsecondary education

The nexus of disability policies and accompanying regulations, improved transition supports in K-12 and post-secondary school as required by federal legislation (e.g., individual transition planning, tier-based intervention systems), and improved postsecondary education options for students with disabilities appear primarily responsible for the increase in students with disabilities participating in postsecondary education. These initiatives have led to higher student K-12 educational outcomes and thus, a generation of students with disabilities more prepared for two- and four-year postsecondary schooling. In this section, we will examine several reasons for progress in postsecondary education for students with disabilities.

2.1. Federal policies and legislation

Since the latter part of the 20th century and into the 21st century, legislation and related legal decisions have had a direct impact on secondary and postsecondary programs and subsequent outcomes for students with disabilities. First, federal legislation such as Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 2004 (PL 108–446) have made it increasingly possible for students to participate in postsecondary education as accommodations for students with disabilities are required (Horn & Berkold, 1999; Stodden & Whelley, 2004; Newman et al., 2010). Additionally, the *Olmstead Supreme Court decision* (1999) (i.e., when possible, states must provide inclusive services to individuals with disabilities in community-based settings, that is using an inclusion approach), and *Higher Education Opportunity Act* (2008) have resulted in an increased focus on supporting individuals with disabilities in postsecondary education (Kurtz, 2011; Morningstar et al., 2010; Stodden & Whelley, 2004).

Of great consequence to students with disabilities participating in postsecondary education has been the requirement for students' individualized transition planning in high school as a component of the Individuals with Disabilities Education Act (IDEA). First mandated in 1990, IDEA requires that post-high school planning must occur for all students with disabilities aged 16 years old and older. Planning for a student's transition to postsecondary education is attributed to activities as far back as 1984 with guidance from the federal Office of Special Education and Rehabilitation Services (OSEP). By then, parents and educators recognized that special education services, mandated federally in 1975 and in full implementation by 1978, were having positive impacts and developing educational opportunities for students with disabilities within the K-12 environment. Yet, school success did not translate to post-school employment and independent living for students with disabilities. Following the "bridges model" for transition planning and services, Madeleine Will, Assistant Secretary for Office of Special Education Programs with the U.S. Department of Education (OSEP), proposed three levels of transition services (i.e., generic, time limited, and ongoing support) with a focus on students' eventual employment. Later, Halpern's (1985)

¹ The Great Recession occurred between approximately 2007 and 2009 (Mishel, Bivens, Gould, & Shierholz, 2012).

perspective that postsecondary outcomes included more than just employment led to IDEA revisions focusing on other factors, such as community living, living environment, and social networking.

Continuing on this momentum in the 1990 reauthorization of IDEA, postsecondary transition was a focus and included a definition of transition services and required the identification of transition services within students' Individualized Education Plan (IEP), connections between schools and outside agencies, and the requirement that state and local educational agencies report and monitor student outcomes (Morningstar, Bassett, Kochlar-Bryant, Cashman, & Wehmeyer, 2012). Subsequent IDEA reauthorizations have continued a focus on postsecondary transition. Consequently, the most recent reauthorization of IDEA includes the following definition of transition services:

A coordinated set of activities for a child with a disability that is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including post-secondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation (IDEA, 2004).

Thus, beginning with the student is 16 years old (or as young as 13 years old depending on the school district, approximating the traditional age at which many students enter and thus begin to think beyond high school) IDEA (2004) requires that each annual Individualized Education Plan (IEP) includes an Individualized Transition Plan (ITP), which includes (a) measurable postsecondary goals addressing training, education, employment, and (if appropriate) skills for independent living; and (b) transition services necessary to support the student attaining the goals (Mazzotti et al., 2009). IEP teams are required to use age-appropriate measures to determine postsecondary goals and necessary transition services. Transition goals are goals students hope to complete after leaving high school; IEP goals must address the means to support students in attaining their transition goals (IDEA, 2004). Completion of the ITP is by the IEP team, which involves families as well as the student with a disability. The ITP explicitly indicates responsibilities for transition planning activities and who will take charge of each. IDEA also mandates that IEP teams implement specific transition planning steps from assessment to goals to identifying services, IEP goal development, service coordination, and performance summary.

K-12 educator training to support postsecondary transition practices can make it more likely for students with disabilities to participate in postsecondary education (e.g., Morningstar, Kim, & Clark, 2009), including training in the implementation of teacher-level evidence-based practices (Test, 2012; Test et al., 2009). Indeed, according to Morningstar and Kleinhammer-Tramill (2005) and Morningstar and Clark (2003), there are now specific transition competencies for teachers. Though a detailed discussion is beyond the scope of this article, a few key teacher competencies are (a) knowledge of IDEA transition requirements, (b) knowledge of specific transition models that include student-focused planning, family involvement, interagency collaboration, and an alignment with general secondary education, (c) ability to develop, organize, and implement transition services, (d) ability to collaboratively plan with transition services with individuals, programs, and agencies, and (e) ability to address problems in the provision of transition services. With this knowledge and implementation of associated practices, K-12 teachers can continue the IDEA (2004) emphasis on students' individualized education as well as student and parent participation in educational decision-making. Indeed, teachers with these competencies hold promise for positively impacting students' post high school transition including participating in postsecondary education.

Two decades of transition initiatives have led to an increasing number of students with disabilities graduating from high school and subsequently participating in postsecondary education. For example, data

collected after the initial inclusion of transition planning into the IEP in 1990 shows that barely 43% of students with disabilities graduated from high school with a regular diploma. Nearly 15 years after the inclusion of the required ITP, graduation rates for students with disabilities increased to 57% (Planty et al., 2009). Not surprisingly, as more students with disabilities graduate from high school, more consider and participate in postsecondary education including technical schools in addition to two-year and four-year programs. For example, in 1990 approximately 26% of students with disabilities were enrolled in postsecondary education, by 2005, nearly 46% of comparable students with disabilities enrolled in two- and four-year postsecondary education programs (Newman et al., 2010). Recent research indicates that students with disabilities are actually one of the fastest growing groups of students enrolled in postsecondary education (Newman et al., 2010).

Once participating in postsecondary education programs, students with disabilities also are receiving more support often with positive results (Larson et al., 2011). For example, as an extension of Section 504 (1973) accommodations combined with the American with Disabilities Act (ADA) (1990), two- and four-year postsecondary education institutions are required to offer accommodations and modifications for students with disabilities enrolled in their programs. Since the 1990s, postsecondary schools are increasingly developing specific services and supports (e.g., a college Office of Disabilities Services) that provide accommodations (e.g., extended time on test, note takers, sign language interpreters) for the student with a disability. Likewise, other non-required academic and social supports for students with disabilities have been identified as effective (Foley, 2006; Milsom & Dietz, 2010; Troiano, 2010). As a result of legislative policies and subsequent K-12 and postsecondary education institution initiatives, students with disabilities are increasingly graduating from high school prepared for and interested in attending postsecondary education programs.

2.2. Tier-based interventions and inclusionary practices

Another initiative critical to student development and impacting outcomes for all students, especially those with and/or suspected of having disabilities, are multiple tiers of support services to ensure success for all learners (Fuchs, Fuchs, & Vaughn, 2008). For nearly a decade, efforts to address the needs for all students, especially those struggling and those with disabilities, have centered on Response to Intervention (RtI). RtI, and its core elements have sought to alter the ways in which public school programs identify, instruct, measure progress, and determine the academic and behavioral interventions most effective for the needs of struggling learners and those identified with disabilities. Across the country, RtI-based initiatives have sought to transform educational programs and outcomes, with some states being at the forefront of educational reforms, both in general and special education. As a result, RtI is transforming special education services and thus, outcomes for students with disabilities. These outcomes include enhanced inclusion in the general education classroom, access to and use of evidence-based interventions more likely to address students' learning and behavioral needs, an increase in educational outcomes and a system that is more responsive to the needs of the learner and thus, adjusts instruction and supports for all learners (Fuchs, Fuchs, & Vaughn, 2008).

The four essential components of RtI are databased decision-making (the essence of effective RtI practice), universal screening, progress monitoring, and multi-level/tier-based instruction (Fuchs, Fuchs, & Vaughn, 2008). All four components, in operation, embed culturally-responsive and evidence-based practices to improve student outcomes. Loosely based on a public health prevention model (Caplan, 1964), RtI offers a tier structure of prevention that intensifies interventions, both learning and behavioral, when the student population needs dictate. Of course, as the intensity of the intervention increases, the instructional minutes,

frequency and duration of the intervention changes, as does the size of the student group being served.

Fuchs, Fuchs, and Vaughn (2008) identify an RtI framework of prevention and intervention, which consists of primary, secondary, and tertiary instruction. Primary prevention, or Tier 1, focuses on universal design, or instruction that benefits all students. Secondary efforts, or Tier 2, involve adaptations that are feasible to implement, generally in the general education classroom. Finally, the tertiary prevention, Tier 3, is intensive and individualized, often involving services provided by a specialist (e.g., special education teacher).

The implementation of RtI has meant that K-12 schools use informal and formal data to identify struggling students; monitor their progress; integrate evidence-based interventions while adjusting the intensity, frequency, and nature of the interventions based on student responsiveness; and finally, identify students in need of more unique, structured and frequent supports in order to extend the educational program that will be responsive to the needs of students with disabilities.

RtI implementation efforts increasingly translate to enhanced student outcomes, especially for those with learning disabilities (Fuchs, Fuchs, & Vaughn, 2008). This K-12 school success is leading to postsecondary education considerations that previously were not an option for generations of students with learning disabilities. That is, former students were lacking postsecondary skills, were not graduating with a typical diploma, were limited in access to general education college preparatory coursework, and missed other critical K-12 elements necessary for acceptance into two- and four-year postsecondary institutions. Considering that RtI initiatives continue to be developed, modified, and extended, expectations are that RtI will further positively impact K-12 student development and outcomes, especially for students with disabilities, and thus, further contribute to students completing high school with a desire and capacity to continue their education.

2.3. Increased postsecondary options

Other initiatives are making it increasingly possible for students with specific categories of disabilities to participate in higher education. A segment of students with disabilities often not considered for postsecondary education are those with intellectual disabilities. Kindergarten through twelfth grade educational and transition planning often focuses on community living and employment preparation and not on college participation (Hart & Grigal, 2010). However, recent changes to the Higher Education Opportunity Act (HEOA) (PL 110-315), enacted in 2008, includes new provisions to improve postsecondary education options for students with intellectual disabilities (i.e., students previously referred to as having “mental retardation”). The three HEOA provisions we will address concern specific funding options for the individual student and his/her family, funding options for the model demonstration projects for postsecondary institutions seeking to offer opportunities to students with intellectual disabilities, and a national coordinated effort to support institutions of higher education as they build, extend, and alter program efforts.

HEOA (2008) specifically defines and includes only students with intellectual disabilities in its provision for the changes in funding and the development of demonstration projects at specific postsecondary institutions. The HEOA modified definition is focused on students with cognitive impairments with limitations in intellectual and adaptive behavior functioning and who are currently, or were formerly, eligible for K-12 special education services under IDEA (2004). For these students, HEOA has made it possible to take advantage of federal financial aid, specifically grants and work-study funds. Prior to the HEOA 2008 reauthorization, college students needed to be fully matriculating and attending college at least half-time to be eligible for financial aid. With the changes, students with intellectual disabilities attending a comprehensive transition program can apply for financial aid to assist in paying these costs. Under the law, a comprehensive

transition and postsecondary program means a degree, certificate, non-degree, or non-certificate program that is designed to support students with intellectual disabilities who are seeking to continue academic, career and technical, and independent living instruction at an institution of higher education (IHE) to prepare for their future and gainful employment. The financial assistance students can access now includes federal Pell grants, the federal supplemental education opportunity grant (e.g., tuition and fee support), work-study opportunities, and eligibility for federal college loans.

In 2010, as a result of the 2008 HEOA reauthorization, the U.S. Congress funded 27 projects to create additional opportunities for students with intellectual disabilities to attend IHEs. Providing nearly 11 million dollars, this funding was awarded to 27 two- and four-year IHEs or consortia of institutions to develop model demonstration projects under a model comprehensive project titled, the Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID). Located across 23 states, TPSID seeks to expand and further develop programs that focus on academics, social activities/development, employment experiences, and independent living. For example, the University of Iowa REACH OUT will develop a two-year certificate program using a person-centered approach to achieve student's postsecondary education, career, and independent living goals (Hart & Grigal, 2010). Like other TPSID, students with intellectual disabilities will attend these programs at a specific IHE often living in student housing and participating in supported experiences typical of a college-age peer.

To coordinate TPSID activities and further develop a vision for other two- and four-year IHEs, HEOA also funded a National Coordinating Center housed at the Institute for Community Inclusion at the University of Massachusetts, Boston (<http://www.communityinclusion.org>). Under this funding, the center has or is in the process of developing evaluation systems as well as standards and best practices around program components in academic, social, employment, and independent living domains. For example, one of the Center's activities is to develop not only standards but also a quality indicator tool comprised of standards, associated quality indicators, and benchmarks aligned with HEOA to assist TPSID projects as well as other IHEs to create, expand, and enhance high-quality experiences for students with intellectual disabilities.

Finally, initiatives to further the participation of students with intellectual disabilities extend to web-based resources such as ThinkCollege (see <http://www.thinkcollege.net>). ThinkCollege focuses on the individual with an intellectual disability and how efforts in research, training and technical assistance, and dissemination can further his/her postsecondary education. Here, parents and other family members can learn about programs in their geographic area, what they offer, financial aid and planning for college, benefits, what program is right for the student and his/her family, and more.

3. Continued challenges to postsecondary education

Clearly, significant progress has been made in the education of students with disabilities both within K-12 public school programs and in institutions of higher education. Through policy and educational initiatives, options for postsecondary education at two- and four-year postsecondary education institutions for students with disabilities are increasing. Purposeful interventions are leading to the inclusion of students with disabilities in meaningful educational opportunities that will enhance their quality of life with respect to employment and living (Wagner et al., 2005).

Nonetheless, challenges endure both illustrating and compounding difficulties to postsecondary education for students with disabilities. Students with disabilities remain far less likely to enroll in postsecondary education than their typically developing peers. While the postsecondary education enrollment gap between students with and without disabilities has narrowed, it remained large at about 17% in 2005 (Newman et al., 2010). Although the rapid changes to postsecondary options for students with disabilities make for a moving target of sorts, a number

of factors impact postsecondary outcomes for students with disabilities. For example, one variable associated with postsecondary education participation is students' disability type. That is, students with vision and hearing impairments enroll in postsecondary education institutions at the highest rates while students with emotional and multiple disabilities enroll the least (Newman, 2005). While disability labels such as these are difficult to associate with disability severity (e.g., the varying degrees of functional disability associated with the label Autism), it appears that students with disabilities resulting in greater cognitive and behavioral impact fair the worst in higher education participation rates. Though these and other challenges exist, for purposes of this journal article, we will focus on three factors: family income, wealth, and family assets, which we will expand upon in a subsequent section of this paper.

3.1. Family income

The numbers of students with disabilities participating in postsecondary education are particularly hopeful given that families of students with disabilities disproportionately have lower incomes. For example, families including individuals with disabilities have an approximately \$21,600 per year pay gap in median household income when compared to families without disabilities (i.e., \$39,600 compared to \$61,200) (Erickson, Lee, & von Schrader, 2011). Moreover, in 2011, 21.8% of non-institutionalized adults with disabilities lived below the poverty line (100% of poverty) compared to 12.8% of individuals without disabilities (American Community Survey, 2011).

One reason families of students with disabilities may be disproportionately from low-income backgrounds is the many costs associated with having a child with a disability including specialized childcare, special clothes, special foods, transportation, medicine, and healthcare costs (Turnbull, Turnbull, Erwin, Soodak, & Shogren, 2011). When poverty and disability intersect, these costs can place substantial financial strain on families of students with disabilities that other families do not have, pushing them into poverty (Meyers, Brady, & Seto, 2000). For example, one study that examines families of students with Autism found that to provide therapies to their children, parents often relinquished their financial security including going into bankruptcy (Sharpe & Baker, 2007).

Increased risk of poverty means that students with disabilities face extra challenges when it comes to school. Research suggests that students from lower income backgrounds, with or without disabilities, have lower educational outcomes than their higher income counterparts (Brooks-Gunn & Duncan, 1997; Duncan, Yeung, Brooks-Gunn, & Smith, 1998; Haskins, 2008). For example, using the 2005 Panel Study of Income Dynamics (PSID) data, Haskins (2008) found that 11% of young adults with parents in the bottom income quintile attained a college degree compared to 53% of young adults with parents in the top income quintile; this was a 42 percentage point gap.

3.2. Family wealth

The financial strain experienced by families of students with disabilities due in part to lower incomes and higher expenses leaves little doubt as to whether or not they could benefit from accumulating wealth or assets. Here, wealth or assets refer to financial resources like savings, net worth, home equity, and home ownership. According to Sherraden (1991), assets such as these represent an accumulated stock of resources kept over a period of time, whereas income is a flow of resources used for current consumption (Sherraden, 1991). Among families of students with disabilities, assets can be used to purchase services, such as medical treatment, assistive technology, special clothing, and other health services for students with disabilities (WHO, 2001). For example, a family of a student with a disability may rely on their income when affording specialized clothes or a new

medication. For the most part, these everyday expenses can perhaps be more easily budgeted out of income. However, specialized childcare and healthcare are arguably more costly and families may need a stock of financial resources beyond their incomes to afford these expenses. Families' need for wealth or assets becomes painfully obvious when the costs of postsecondary education are coupled with the financial strain of caring for students with disabilities. Assets can provide families with financial resources and the ability to invest in students' human capital development (Mayer, 1997).

A few studies provide insight into reasons families with disabilities might benefit from accumulating assets. Researchers examine net worth poverty among a sample ($n = 753$) of families caring for students aged six and older with developmental disabilities from the Survey of Income and Program Participation (SIPP; Parish, Rose, & Swaine, 2010). Fifty-five percent of these families whose heads of household were under age 45 and 40% whose heads were between ages 45 and 54 met the definition of net worth poverty—lacking net worth equivalent to three months' worth of income. Parish, Grinstein-Weiss, Yeo, Rose, and Rimmerman (2010) compared the net worth of households with ($n = 4154$) and without ($n = 12,365$) adults with disabilities. Net worth refers to the summed value of assets, such as savings, stocks, home equity, and vehicle equity, minus the summed value of debts, such as mortgages, loans and credit card debt. Having an adult in the family with a disability was associated with significantly lower net worth—an amount of \$37,558 less compared to a family without an adult with a disability. For individuals outside of a marital or family relationship that had a disability, their net worth was also significantly less than their counterparts that did not have a disability. The net worth of single women and men with a disability was respectively \$38,530 and \$34,847 less than their non-disabled counterparts (Parish et al., 2010). The differences in accumulated net worth between families with and without members with disabilities is enough to cover some or all of families' expenses related to specialized childcare discussed by Turnbull et al., 2011, such as special clothes, special foods, transportation, medicine, and healthcare.

From this perspective, families of students with disabilities are far more likely to be in need of assets than families of students without disabilities. It is noteworthy that the net worth difference of \$37,558 between these families is more than the \$26,683 in loan debt acquired by the average student (Baum & Payea, 2012; Fry, 2012). In other words, families of students without disabilities have greater net worth to use toward postsecondary education expenses and families of students with disabilities may be at a financial disadvantage. Accumulating assets, then, may be beneficial for these families by helping them prepare in advance for and afford postsecondary expenses and conceptualize postsecondary education as a realistic, attainable goal. According to Sherraden (1991), assets generate economic, social, and psychological effects that income alone cannot. This happens, at least in part, because assets are a more stable and reliable form of financial resources than income. Assets, therefore, may enable students with disabilities and their parents to begin developing a long-term plan for financing college. Moreover, financial assets may encourage the development of a college-bound identity (i.e., positive expectations) by connecting students with disabilities with a viable strategy for paying for college and signals to them a more hopeful future.²

While education research has given considerable attention to income (Axinn, Duncan, & Thornton, 1997; Brooks-Gunn & Duncan, 1997; Duncan et al., 1998), literature on college attendance and graduation often excludes assets as a key variable. Education scholars may

² Elliott and Nam (under review) refer to the identity that combines seeing college as desirable along with a strategy for paying for college as a college-saver identity. They suggest that a child can see their selves as being college-bound but not have a strategy for paying for college. As a result, they suggest that children may not act on the college-bound identity.

largely ignore assets because economists traditionally view income and assets as one concept (Sherraden, 1991). There is a growing body of evidence to support the contention that assets and income are distinct concepts (e.g., Lerman & Mikesell, 1988; McKernan & Sherraden, 2008; Oliver & Shapiro, 2006; Schreiner & Sherraden, 2007). The recent recognition of income and assets as separate concepts, combined with evidence that asset accumulation is highly skewed (i.e., some people have a lot of debt while others have a lot of accumulated assets in the form of homeownership, saving, stocks, etc.), has led to increased interest by researchers and policymakers in examining the role that assets may play in students' educational outcomes (Elliott et al., 2011). However, with a few exceptions (e.g., Cheatham & Elliott, 2012), asset researchers have largely overlooked students with disabilities when discussing educational outcomes.

With respect to investing in human capital development, asset researchers have found that family assets are important predictors of students' academic achievement (i.e., math and reading scores) (Orr, 2003; Williams Shanks, 2007; Zhan, 2006; Zhan & Sherraden, 2003). In addition to household assets, savings in a student's own name can play an important role in predicting students' educational performance as well (Elliott, 2009; Elliott, Jung, & Friedline, 2010). Household assets have also been found to positively predict students' educational attainment (Conley, 2001; Nam & Huang, 2009). Oliver and Shapiro (2006) suggest that high unmet need for college is largely the result of low asset accumulation. Cheatham and Elliott's (2012) study is the only study to specifically examine effects of assets on college enrollment patterns of students with disabilities. Instead of examining the effects of net worth, they examine the effects of parents' college savings (e.g., college savings bonds, child investment funds, savings for child's education). They find a significant positive relationship between parents' college savings bonds for their children with disabilities and their children's college enrollment. Similar to household assets, students' savings has been found to be a positive predictor of students' college enrollment (Elliott & Beverly, 2011; Elliott & Nam, 2012) and college graduation for students without disabilities (Elliott, 2013).

In addition to assets' potential for direct effects (e.g., helping families pay for educational expenses), students and household assets also may have indirect effects on students' educational outcomes (Elliott & Beverly, 2011; Orr, 2003; Zhan, 2006; Zhan & Sherraden, 2003). One line of research examines whether assets have indirect effects on students' educational outcomes that occur by increasing parents' involvement with their child and through such characteristics as educational resources in the home (e.g., Orr, 2003). While these are likely important ways that assets influence students' educational outcomes and are worthy of further investigation, another important way that assets may indirectly affect students' educational outcomes that researchers are investigating is through parents' and students' educational expectations. College choice research also suggests that high college costs dampen students' expectations for attending college (ACSFA, 2001, 2002, 2006). College expectations have been shown to be a strong predictor of students' academic achievement as well as college enrollment rates (Beal & Crockett, 2010; Marjoribanks, 1984; Mau, 1995; Ou & Reynolds, 2008). The potential for assets to positively affect parents and students' educational expectations may be particularly important for students with disabilities, because they and their parents are more likely to have low expectations (Newman, 2005).

Assets may not address all the unique challenges for attaining postsecondary education that confront students with disabilities, such as disability severity and/or characteristics. However, asset accumulation represents one way to help families afford current and future expenses related to their students' care and postsecondary education, while simultaneously developing families' and students' expectations that postsecondary education is a realistic, attainable goal.

3.3. Family and student expectations

Parents' expectations are also important to shaping both academic engagement and achievement for students with and without disabilities (Newman, 2005). Moreover, parents' expectations are predictors of students' participating in postsecondary education (Doren, Gau, & Lindstrom, 2012). There is also evidence that parent and students' expectations are mediating pathways regarding students' ultimate participation in postsecondary education (Oyserman, Bybee, & Terry, 2006; Zhan, 2006). Both parents and students with disabilities tend to have lower expectations regarding postsecondary education compared to parents and peers without disabilities (Newman, 2005). This suggests parents and students with disabilities could benefit from increasing their postsecondary education expectations, hopefully improving the likelihood of students' postsecondary enrollment and graduation.

When other factors are equal, parents with higher postsecondary education expectations for their students with disabilities are more engaged and their students have higher academic achievement during high school than students whose families are more pessimistic (Newman, 2005). However, both parents and students with disabilities are more likely to have low expectations regarding postsecondary education compared to parents and peers without disabilities (Newman, 2005). For instance, Cheatham and Elliott (2012) found that 89% of students without disabilities expected to attend college while only 70% of students with disabilities have the same aspiration. Similarly, 80% of parents of students without disabilities expected their children to attend college while only 56% of parents of students with disabilities had the same expectation (Cheatham & Elliott, 2012). Importantly, students with cognitive disabilities, Autism, and multiple disabilities faced the lowest college expectations while students with learning disabilities had the highest (Newman, 2005).

Moreover, those students with disabilities from socioeconomic and ethnically diverse backgrounds can face the greatest expectations challenges. For instance, families from lower-income backgrounds face more challenges for developing academic expectations compared to families from higher-income backgrounds (Newman, 2005). As Newman (2005) surmised, lower postsecondary education expectations for students from lower-income families may be associated with both difficulty paying for higher education as well as the lower graduation rates for students enrolled in schools with large numbers of students from lower-income backgrounds.

Finding ways to help students with disabilities and their parents improve their educational expectations may be a way to build on gains made by existing federal policies that improve postsecondary educational outcomes of students with disabilities that have not been fully tapped. Building family assets may be one strategy for helping to improve these students' and their parents' educational expectations. Among adults with disabilities, policy makers are devising strategies to help them build assets that include Individual Development Accounts (IDAs) which are a type of savings account designed specifically to help families from low-income backgrounds save (see for examples, Ball, Morris, Hartnet, & Blanck, 2006; Schmeling, Schartz, Morris, & Blanck, 2006). IDAs typically include some type of initial deposit, a match (e.g., families save \$1 and another \$1 is placed in the account), incentives, and a financial education component. Usually, IDAs can only be used for putting a down payment on a home, starting a business, paying for postsecondary education, or saving for retirement. IDAs are similar in many regards to the Registered Disability Savings Plan (RDSP),³ which was rolled out in Canada in 2008. RDSP helps families save toward future expenses and financial stability of someone eligible for the disability tax credit. Families

³ For more information on RDSP, please visit the following website: http://www.hrsdc.gc.ca/eng/disability_issues/disability_savings/.

can earn matches of 300% up to \$3500 annually for a maximum lifetime accumulation of \$70,000 in savings.

An example of a policy that promotes IDAs as a way for individuals with disabilities to save and build assets is the [Supplemental Security Income Savers Act \(2011\)](#), which was introduced into Congress in 2011. The SSI Savers Act would reform asset limit tests in the SSI program to allow people with a disability to open bank accounts, work, and save. Current asset limits restrict the amount of assets individuals with disabilities can possess while still receiving SSI. Generally, SSI is limited to those who have no more than \$2000 in assets for an individual and \$3000 for a couple. This allows people with disabilities little opportunity to accumulate emergency savings let alone savings for postsecondary education. The SSI Savers Act would: (a) increase asset limits from \$2000 (single), and \$3000 (couple) to \$5000 and \$7500 respectively, (b) for recipients younger than 65, it would exclude retirement accounts, education savings, and IDAs from counting against the limit, and (c) for recipients 65 and older, it would allow retirement accounts up to \$50,000 (single) and \$75,000 (couple) and reduce SSI benefits accordingly instead of creating an immediate cutoff. The SSI Savers Act is currently referred to committee.

While there is some progress with regard to assets for adults with disabilities, far less attention has been paid to building assets for students with disabilities and their families. Child Development Accounts (CDAs) may provide a way for students with disabilities and their families to begin to save for postsecondary education. Child Development Accounts are similar in design to IDAs and are proposed to be opened at birth or soon after. This is to provide students with longer time horizons to benefit from the positive effects of asset accumulation and to experience improved well-being as they move throughout the life course. In the United States, CDAs were field tested in 12 locations across the country in the Saving for Education, Entrepreneurship, and Downpayment (SEED) initiative in 2003 (Sherraden & Stevens, 2010). As the title of SEED suggests, students can often save in CDAs for expenses like education, small business start-up, home ownership, or retirement.⁴ In addition, the America Saving for Personal Investment, Retirement, and Education (ASPIRE) Act, which proposes the establishment of a CDA account for every newborn (to include those with disabilities), have been regularly introduced into congressional sessions since 2004.

4. A new CDA research demonstration may be a model

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a federally funded Department of Education (DOE) program. GEAR UP is designed to help middle and high school students from low-income backgrounds prepare for college by offering such activities as academic and personal counseling, tutoring, assistance with college applications, cultural and educational trips, financial aid information workshops, SAT prep classes, mentoring, and leadership development. These activities, while different, have similarities that need to be further explored when talking about students' IEPs and ITPs as discussed earlier for students with disabilities. However, DOE recognized that more is needed to be done for GEAR UP students. As a result, DOE has begun to test the viability of CDAs for improving educational expectations, academic performance, and postsecondary education outcomes for GEAR UP students through a research demonstration project.

More specifically, the demonstration will test the effectiveness of pairing new federally supported college savings accounts (i.e., CDAs) with GEAR UP activities against the effectiveness of standard GEAR UP activities that do not include college savings accounts. The project will provide 10,000 GEAR UP students entering ninth grade in the fall of

⁴ While CDAs can be used to save toward multiple expenses, we emphasize CDAs as a saving vehicle for postsecondary education expenses given the focus of our discussion. However, we do recognize that there may be other expenses toward which students with disabilities and their families are saving in their CDAs.

2013 with a savings account, initial deposit of \$200, savings matches up to \$10 per month, and financial education classes in addition to already-planned GEAR UP services. At the end of the program, if students receive the maximum federal match they will have \$1600.⁵ Students participating in GEAR UP and who receive a savings account will be compared to a randomly selected control group of 10,000 students who will only receive regular GEAR UP services.

This could be a promising model for extending CDAs to students with disabilities because GEAR UP pairs CDAs with the students' educational systems and provides supportive services that could be of potential benefit to students with disabilities. Pairing CDAs with educational systems may make salient the connection between savings and postsecondary education, perhaps raising students' and their families' expectations for the future. CDAs within educational systems that are paired with supportive services may assist students with disabilities by incorporating transition services and goal planning—services that are especially relevant to and can be tailored for students with disabilities.

5. Implications

Family assets provide a promising approach for supporting greater participation in postsecondary education for students with disabilities. In this section, we first discuss implications of the GEAR UP research demonstration for policy related to students with disabilities followed by implications for practice.

5.1. Implications for policy

We suggest that DOE might consider offering a similar type of program to students with disabilities. Like students from low-income backgrounds, students with disabilities may face insufficient financial resources for college, low expectations, and lack of financial knowledge. This CDA program, which helps build students' and families' assets, could be presented during planning discussions about students' IEPs and ITPs, particularly regarding postsecondary goals for the students with disabilities. A school-based CDA program for students with disabilities might particularly fit with ITP's goals of providing these students with skills for independent living and support for postsecondary education. While the ITP might provide some financial education consideration, research suggests that financial education classes may be more effective when students have access to a savings account (Mandell & Klein, 2007; Sherraden, Johnson, Guo, & Elliott, 2011). At the very least, DOE might want to conduct additional analysis for students with disabilities as a subgroup within the GEAR UP research demonstration and see if this program is of any benefit.

Even external from GEAR UP, other policy opportunities might be relevant to students with disabilities. For instance, CDAs are intended to be universally provided to students at birth or soon after. If designed and implemented in this way, students with disabilities would have the opportunity to save for their futures. Perhaps CDAs can consider an option like Registered Disability Savings Plan (RDSP) in Canada, which provides matches on monies deposited into the accounts of individuals with disabilities. In other words, CDAs might consider including disability status as another form of eligibility for receiving matches on deposits, incentives, and financial education tailored to the unique financial needs of students with disabilities and their families.

Additionally, special education laws (i.e., IDEA, 2004) can be revised to reflect the recent changes in accessibility and importance of postsecondary education for students with disabilities. More specifically,

⁵ Some may question whether \$1600 is truly an adequate savings amount given high postsecondary education costs. In other words, what difference can such a small amount make in the overall scheme of postsecondary education financing? However, research shows that having even a small amount of savings designated for school—what researchers refer to as small-dollar accounts—can have a positive effect on students' enrollment and persistence in postsecondary education through graduation (see for example, Elliott, Song, & Nam, 2013).

IDEA (2004) currently requires postsecondary education planning beginning approximately when students enter high school; however, longer-term planning appears necessary, particularly for students with disabilities who face greater challenges to postsecondary education preparation, participation, and degree attainment. This postsecondary education-planning requirement (via the Individual Transition Plan as a component of the IEP) would provide impetus for increased research investigating K-12 educators' effective early transitioning practices. Thus, the IDEA (2004) requirement for individualized transition planning could begin in middle or elementary school as a way to provide greater time for planning, accumulation of resources such as financial assets needed to pay for school, and students' skills acquired within K-12 settings leading to increased likelihood of participation and success in postsecondary education.

5.2. Implications for practice

Implications for special and general educators also result from the importance of family assets to postsecondary education outcomes for students with disabilities. First, educators should engage in professional development to know and follow through with best practices in transition (see Benitez, Morningstar, & Frey, 2009). Educators teaching students self-determination skills can also be important to their postsecondary transition goal attainment (Shogren, Palmer, Wehmeyer, Williams-Diehm, & Little, 2012). When all members of the IEP team have such a background, planning during students' elementary and secondary years is more likely to lead to their success at the postsecondary education level.

Second, collaboration and partnerships between educators and families is critical (Shogren & Plotner, 2012). Though teachers come and go in the educational lives of students, their parents and families persist. Thus, educators should support families' advocacy and planning for effective K-12 education, transition planning, and ultimate success in postsecondary education for students with disabilities. Educators may face the challenge of families who hold outdated perspectives on educational outcomes for their children. Families who have a more traditional notion of capabilities for students with disabilities in general as well as their own child can be led to view postsecondary education not only as important to their child's long-term quality of life but also as a viable postsecondary goal. Because expectations are critical to educational success at all levels (e.g. Cheatham & Elliott, 2012; McKown & Weinstein, 2008), educators can work with families focusing on supporting high educational expectations for families of students with disabilities including parents and students themselves.

Families can also be supported to understand and access more information about current resources and programs available to their children with disabilities. For instance, families may not know about the increase in students with disabilities participating in postsecondary education nor the kinds of supports available within the K-12 (e.g., transition planning) and at the postsecondary education level (e.g., college disability support centers). Knowledge of current legal and policy initiatives are critical given this fast-moving area. Similarly, because the accumulation of assets including savings for students' postsecondary education is essential, educators can be charged with fostering knowledge of the importance of assets. In practical terms, given educators' expertise, they will need to place families in contact with financial planners who know about legalities and finances for families, students, and adults with disabilities to ensure the most effective and appropriate planning (e.g., CDAs versus other types of savings opportunities).

6. Conclusion

In summary, recent federal policy as well as associated K-12 and higher education practice initiatives have resulted in students with disabilities being increasingly prepared for and enrolling in postsecondary

education. However, these students continue to be underrepresented in postsecondary education institutions compared to students without disabilities. Given previous research illustrating the importance of family assets to postsecondary education enrollment, a focus on supporting family assets holds promise for positive postsecondary educational outcomes for students with disabilities. With policy and practice changes, the hope of increasing postsecondary school enrollment and success for students with disabilities may be realized.

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