GUIDEPOSTS FOR SUCCESS 2.0
Research Base Paper

NATIONAL COLLABORATIVE ON WORKFORCE & DISABILITY FOR YOUTH

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Contents

Introduction

It has been over a decade since the Guidepost for Success was introduced as a national youth transition framework by the National Collaborative on Workforce and Disability for Youth (NCWD/Youth) with support from the U.S. Department of Labor's Office of Disability Employment Policy (ODEP). First published in 2005, the initial Guideposts were developed in concert with the National Alliance for Secondary Education and Transition (NASET) then funded by the U.S. Department of Education's Office of Special Education and Rehabilitative Services (OSERS), and based upon a common literature review conducted by NASET and NCWD/Youth. Both organizations produced frameworks addressing what all youth need in terms of quality services, supports, and opportunities in five domains: 1) School-Based Preparatory Experiences; 2) Career Preparation and Work-Based Learning Experiences; 3) Youth Development and Leadership; 4) Connecting Activities; and 5) Family Involvement and Supports. The Guideposts are structured first to address what all youth need to be successful as students, workers, and members of families and communities, and second to identify what additional supports youth with disabilities need to achieve independence in the adulthood. It was recognized at the outset that no one organization has the capacity or the charter to address all the developmental needs of individual youth.

Three factors influenced the need to conduct an updated literature review and revision of the Guideposts. First, NCWD/Youth expanded the age range which it focuses upon to include younger youth in the middle school years and young adults up to age 25. Second, experience garnered by NCWD/Youth as it developed multiple products over the past decade highlighted the need to broaden the literature review to include additional lessons centered on implementation of services and how to improve implementation through policy levers. Third, NCWD/Youth recognized a need for deeper examination of major core systems (i.e., education, workforce development, child welfare, corrections, health and mental health) due to the interdependency across the programs within these systems that strongly affect the support systems that youth need to succeed.

For the purposes of this review, NCWD/Youth consulted the following types of sources: (1) research and evaluations sponsored by federal agencies with substantive responsibility for program oversight; (2) research and reports from an array of federally funded technical assistant centers (TACs) that serve as a conduit to build the linkages between researchers and practitioners, or cross governmental boundaries; (3) foundations that specifically focus on this age group;(4) think tanks and non-profit organizations; and, (5) professional societies particularly those who influence professional development standards for specialists and/ or sponsor peered reviewed journals, and (6) synthesizers initiatives. The sixth source type referred to as synthesizers initiatives (SIs) can be sponsored by a single organization but more often represent a temporary coming together of a network of multiple stakeholder groups focused on a

specific issue. Common results of the SI include Standards of Practice products or frameworks focused on processes. The SI sources are documents -- general frameworks or content specific materials -- informed by available research and theories of change vetted through a consultation process sponsored by one organization such as a professional society or a broad based collaboration of informed stakeholders. National membership organizations representing state and local governments and specific positional leaders such as chief state school officers, and other positional leaders in the health, welfare, social service and workforce development are examples of organizations that have become actively involved in SIs.

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School-Based Preparatory Experiences

Over the last decade, considerable attention has been focused on reforming the structure, curricula, and climate of U.S. high schools to improve economic competitiveness and college and career readiness (CCR) (Fowler, Test, Cease-Cook, Toms, and Bartholemew, 2014). In its Blueprint for Reform, the U.S. Department of Education asserted that "every student should graduate from high school ready for college and a career and have meaningful opportunities to choose from upon graduation from high school" (U. S. Department of Education, 2010a, p. 7). Policies and practices designed to improve CCR of all students should simultaneously improve the CCR of students with disabilities (Fowler, Test, Cease-Cook, Toms, and Bartholemew, 2014). For the purposes of this review, the literature on school-based preparation is organized by the following themes:

- Rigorous curricular and program options;
- Engaging instructional approaches;
- Qualities of the learning environment;
- Access to effective teachers;
- Re-engagement strategies for students who become disconnected; and
- Postsecondary success strategies.

Rigorous Curricular and Program Options

High school experiences, particularly those related to course taking, course rigor and performance, and high school grades can have a significant impact on rates of high school graduation and college matriculation and completion for all students. According to Adelman (1999, 2006), academic course taking in high school predicted college completion, even after controlling for other predictors of college success. Long, Conger, and Iatarola (2012) also found that students who took rigorous high school academic courses were more likely to enroll in college, earned more college credits, had higher college GPAs, and were more likely to earn a bachelor's degree. Based on a six-year examination of longitudinal data from the California State University system, Jackson and Kurlaender (2014) found that students who were ready for college (as indicated by not needing to take remedial level courses) were more likely to persist into their sophomore year and more likely to complete college. In addition, when controlling for readiness level, high school GPA was found to be significantly related to retention and graduation.

Having a disability can influence students' secondary course taking and therefore their likelihood of completing college. Hitchings, Retish, and Horvath (2005) found that while 77% of a sample of 110 high school sophomores expressed interest in attending college, only four of the students were enrolled in college preparatory classes. By the end of their junior year, only one

student was still taking such courses. Weiss, Hutchins, and Meece (2012) similarly found that 79% of the students with disabilities reported wanting to continue their education after high school but were statistically less likely than their peers to be enrolled in college preparatory classes and more likely to be in vocational programs.

To reduce academic achievement gaps, schools need to identify and implement high quality instructional practices and curricula that fit the needs of diverse learners, including students with disabilities (Aspen Institute Education & Society Program & CCSSO, 2017). Recommended research-based strategies for increasing students' postsecondary readiness and preventing disengagement from school include the following:

- offering courses and curricula that prepare students for college-level work and ensuring that they understand what constitutes a college-ready curriculum by ninth grade;
- utilizing assessment measures throughout high school so that students are aware of how prepared they are for college and assisting them in overcoming deficiencies as they are identified;
- monitoring the progress of all students and proactively intervening when students show early signs of academic and other challenges;
- providing intensive, individualized support to students who are off track academically and experiencing challenges;
- offering curricula and programs that connect schoolwork with college and career success and that improve students' capacity to manage challenges in and out of school; and
- creating small, personalized communities within schools that serve a large proportion of struggling students to facilitate monitoring and support (Tierney, Bailey, Constantine, Finkelstein, & Hurd, 2009; Rumberger et al., 2017).

Studies specific to students with disabilities point to some similar factors correlated with student outcomes as well as some additional strategies. A synthesis of high-quality correlational research in secondary transition published since 1985 identified 17 evidence-based predictors of post-school employment, education, and independent living success for students with disabilities (Test, Mazzotti, et al., 2009). These predictors include: career awareness, community experiences, exit exam requirements/high school diploma status, inclusion in general education, interagency collaboration, occupational courses, paid employment/work experience, parent expectations, parental involvement, program of study, self-advocacy/self-determination, self-care/independent living skills, social skills, student support, transition program, vocational education, and work study. One of these positive predictors for students with disabilities, a relevant program of study, is defined as "an individualized set of courses, experiences, and curriculum designed to develop students' academic and functional achievement to support attainment of students' desired post-school goals" (Rowe et al., 2013). According to Morningstar and Mazzotti (2014), effective transition programming therefore requires secondary teachers to have the knowledge and skills to work with students to develop an individualized program of

study that incorporates relevant school experiences that engage students throughout their secondary school years. This requires that they be able to understand and implement evidence-based practices, predictors of post-school success and individualized learning plans models (Solberg, Wills, & Osman, 2012), and diploma options available to all students.

The National Technical Assistance Center on Transition (NTACT) provides guidance on evidence-based strategies for secondary students with disabilities. Test, Fowler, et al. (2009) identified 64 evidence-based instructional strategies for secondary students with disabilities through a comprehensive literature review of experimental (both group and single subject) research studies. The strategies identified included strategies for teaching students a variety of secondary transition skills including academic skills, employment skills (e.g., completing a job application, job specific skills), individual education program (IEP) participation skills, social skills, and independent living skills (e.g., purchasing skills, banking skills, leisure skills).

Some elements of transition planning have also been linked to higher rates of postsecondary supports. Newman, Madaus, and Javitz (2016) reported that students who received education on transition planning during high school were more likely to receive disability-specific supports at two-year colleges, and those who had transition plans that directly specified needed postsecondary accommodations and supports were more likely to receive disability-specific supports at two-year and career and technical education (CTE) schools. Analyzing data from the National Longitudinal Transition Study-2, Newman, Madaus, and Javitz (2016) found that both receiving transition planning education and having a transition plan that specified needed postsecondary accommodations on the receipt of disability-specific services and generally available supports at the postsecondary level both significantly increased the odds that students with disabilities would receive disability-specific and generally available supports at two-year institutions. Similarly, career and technical education (CTE) students who received transition planning education in high school were more likely to receive generally available supports at career and technical education (CTE) schools, while those with transition plans specifying accommodations were more likely to receive disability-related supports.

In their analysis of educational reform's implications for college and career readiness among youth with disabilities, Fowler and colleagues outlined the following policy recommendations relevant to school-based preparatory programs:

- *Curricula:* In alignment with the Common Core State Standards, the authors recommend a multiple pathways approach to graduation that includes "(a) exiting with a diploma, (b) providing a program of study aligned with post-school goals, (c) providing a comprehensive transition program, (d) completing vocational education courses, and (e) participating in a work/study program" (p. 23).
- *Research and Instruction:* To support tiered instructional support, inclusive of students with disabilities, the authors recommended that "…funding for research should continue

to provide practitioners a pool of evidence-based interventions from which to choose for implementation in schools…" (p. 23).

- *Assessment and Accountability:* The authors recommended providing state assessments that are universally designed to include "(a) an inclusive test population; (b) precisely defined constructs; (c) accessible, non-biased items; (d) tests that are amenable to accommodations; (e) simple, clear, and intuitive instructions and procedures; (f) maximum readability and comprehensibility; and (g) maximum eligibility" (p. 25).
- *Personnel Development:* Regarding federal requirements that all educators to be highly qualified, the authors recommended, "…the various factors associated with 'quality' must be clearly defined for secondary educators of students with disabilities" (p. 25). Personnel development must advance evidence bases and the principles of Universal Design for Learning, "…using flexible curricular materials and activities that offer alternatives for students regardless of disparities in abilities and backgrounds" (Orkwis & McLane, 1998, p. 22).

As most students in the United States now progress through consistent learning standards toward a high school diploma, researchers suggest that multiple pathways to graduation are necessary (Harvard Graduate School of Education, 2011). Fowler, Test, Cease-Cook, Toms, & Bartholomew (2014) suggest that, like the Pathways to Prosperity program, students can use multiple ways through multiple avenues of coursework to demonstrate proficiency on learning standards. The authors recognize that this approach aligns closely with several of the research-based predictors of post-school success identified by Test. Mazzotti, et al. (2009), which include: (a) exiting with a diploma, (b) providing a program of study aligned with post-school goals, (c) providing a comprehensive transition program, (d) completing vocational education courses, and (e) participating in a work/study program). The researchers emphasize that for students with disabilities, the diploma should not represent "watered down" academic content or a "tracked" system of either college or employment preparation. Rather, the reference to multiple and rigorous pathways toward graduation recognizes that all students could benefit from career development activities that would prepare them for success in various settings (e.g., university, technical school, employment with job training, short-term postsecondary training) that await them after high school.

Research indicates that a collaborative culture among school professionals is critical to school improvement efforts, including efforts to develop inclusive education for students with disabilities (Waldron & McLeskey, 2010; Fullan, 2007). Reform efforts that include active participation of both general and special educators and critical home, school, and community stakeholders are essential to ensuring the postsecondary success of all students (Morningstar, Bassett, Cashman, Kochhar-Bryant, & Wehmeyer, 2012). Burr, Haas, and Ferriere (2015) noted the need for increased focus on linkages aimed at identifying English language learners (ELL) with learning disabilities and making timely, individualized interventions based on the shared expertise of general, ELL, and special education staff.

Engaging Instructional Approaches

This section describes the literature on three approaches to designing instruction that is engaging and meaningful to students, thereby improving their academic outcomes. These approaches include personalized learning, career-technical education and other school-based career preparation, and individualized learning plans.

Personalized Learning

Early research suggests that personalized learning may improve student achievement (Pane, Steiner, Baird, & Hamilton, 2015). While there is no widely accepted agreement on the definition of personalized learning, the Center on Innovations in Learning (CIL) describes it as follows:

> Personalized learning refers to a teacher's relationships with students and their families; the use of multiple instructional modes to scaffold each student's learning; enhancing the student's motivation to learn as well as enhancing metacognitive, social, and emotional competencies to foster self-direction and achieve mastery of knowledge and skills. Personalization ensues from the relationships among teachers and learners and the teacher's orchestration, often in co-design with students, of multiple means for enhancing every aspect of each student's learning and development. Personalized learning varies the time, place, and pace of learning for each student, enlists the student in the creation of learning pathways, and utilizes technology to manage and document the learning process and access rich sources of information. (Murphy, Redding, and Twyman, 2016, p. xi)

The existing literature base indicates that personalized learning models often exhibit a specific set of characteristics, including learner profiles and personalized learning paths as well as alternative grading systems and flexible learning environments (Bill & Melinda Gates Foundation, 2014; Pane, Steiner, Baird, & Hamilton, 2015). Unlike differentiation, personalized learning includes learning goals that are specific to the individual. In an environment that is fully personalized, the learning objectives and content, as well as the method and pace, may vary (so personalization encompasses differentiation and individualization) (Office of Educational Technology, 2010). ASCD and the Council of Chief State School Officers jointly identified the following essential elements and policy enablers of personalized learning: flexible, anytime, everywhere learning; redefine teacher role and expand "teacher"; project-based, authentic learning; student-driven learning path; and mastery/competency-based progression/pace.

While many of personalized learning's concepts and approaches are rooted in learning and youth development theory, empirical research on personalized learning itself is limited (Nellie Mae Foundation, 2015; Basham, Hall, Carter & Stahl, 2016). Still, multiple studies find

that students in a personalized learning setting outperform their peers in traditional classes (Research & Policy Support Group, 2010; Bill & Melinda Gates Foundation, 2014; Nellie Mae Foundation, 2015). Recent research by the RAND Corporation indicates that the longer students experience personalized learning practices, the greater their growth in achievement (Pane, Steiner, Baird, & Hamilton, 2015).

The National Center for Learning Disabilities (NCLD) has developed recommendations to ensure that schools appropriately and fully include students with disabilities in developing, implementing, and evaluating personalized learning systems (Jones & Casey, 2015). Their report emphasizes the importance of using universal design for learning (UDL) principles to design the materials, assessments, and instructional strategies within personalized learning systems. It also stresses the need for a multi-tiered system of support (MTSS) to provide students the supports and interventions that match their needs. By incorporating UDL and MTSS into personalized learning systems, schools can better tailor the instructions and learning for every student and meet students where they are while supporting them to progress toward meeting high standards (Jones & Casey, 2015).

Multiple studies reflect the importance of students' ongoing, active, enthusiastic participation in academic activities as a driver of learning, retention, and academic performance, as well as a protective factor against negative outcomes such as gang involvement and school dropout (Christenson, Reschly, & Wylie, 2012; Upadyaya & Salmela-Aro, 2013). Studies also show that students' engagement in learning activities is increased by rich and diverse learning environments (Christenson, Reschly, & Wylie, 2012; National Research Council and Institute of Medicine of the National Academies, 2004; Shernoff, 2013; Shernoff & Bempechat, 2014; Shernoff, Ruzek & Sinha, 2016). Such environments can include a wide range of options such as educational video games (Coller, Shernoff, & Strati, 2011), school-based academic and arts enrichment programming after school (Shernoff & Vandell, 2007), and collaborative group work (Sinha, Rogat, Adams-Wiggins, & Hmelo-Silver, 2015). To promote engagement, it is important that these learning environments include the presence of a combination of environmental challenge and environmental support (Hospel & Galand, 2016; Shernoff et al., 2016; Skinner & Pitzer, 2012; Shernoff et al. 2016; Urdan & Turner, 2005).

Competency-based education (CBE) is subsumed with CIL's definition of personalized learning. According to the U.S. Department of Education:

> Transitioning away from seat time, in favor of a structure that creates flexibility, allows students to progress as they demonstrate mastery of academic content regardless of time, place, or pace of learning. Competency-based strategies provide flexibility in the way that credit can be earned or awarded, and provide students with personalized learning opportunities. (U.S. Department of Education, n.d.)

> Redding (2016) describes competency-based education (CBE) in the context of personalized learning as involving "(a) an identified cluster of related capabilities (the competencies); (b) variation in the time, place, and pace of learning; and (c) criteria, including demonstrated application, to determine and acknowledge mastery" (p. 6).

Such competencies may be personal, academic, or career/occupational. Redding explains that "enhancing the student's personal competencies" refers to intentionally building their capacity to learn by incorporating into instruction and teacher–student interactions content and activities that enhance the student's cognitive, metacognitive, motivational, and social-emotional competencies, which taken together are propellants of learning and form the student's learning habits. Because a student's self-direction in learning is integral to personalized learning, the acquisition of personal competencies is described by Redding as particularly important for student success.

Technology plays an integral role in personalized learning in several ways. It makes the learning process more engaging because the learner has more choice over what, where, and how they will learn and at what pace (U. S. Department of Education, 2017). Learning management systems, student information systems, and other software can be used to distribute assignments, manage schedules and communications, and track student progress (Herold, 2016). Technology also has the capacity to make student assessment more streamlined and meaningful. In addition to helping to reduce the time, resources, and disruption that paper assessments entail, technology based assessments can provide a more complete and nuanced picture of student needs, interests, and abilities (West, 2011).

Assessments and instruction can be adapted through the use of sophisticated software to address individual needs and abilities in real time. Adaptive learning systems change to better suit the learner in response to information collected during the course of learning rather than based on pre-existing information (Murray & Perez, 2015). Problems can be situated in real-world environments where students perform tasks or involve multi-stage scenarios and simulations (U.S. Department of Education, 2017). In addition, they can also detect when students are bored or frustrated and change to promote their re-engagement (D'Mello & Graesser, 2010).

An abundance of technology can also be a distraction or detriment to academic progress. A number of studies have reported either a negative relationship or no significant relationship between technology use and academic performance, including technology use in the classroom (Sana, Weston, and Cepeda, 2013); calling and texting (Jacobsen and Forste, 2011; Lepp, Barkley, and Karpinski, 2014, 2015); and instant messaging (Junco & Cotten, 2011).

Still, social media may be a promising academic tool. Manca and Ranieri (2013) reviewed 23 empirical studies about using Facebook as a learning environment and identified the following five educational uses of Facebook: (a) to support class discussions and helping

students engage in collaborative learning; (b) to develop content; (c) to share educational resources; (d) to deliver content to expose students to extra-curricular resources; and (e) to support self-managed learning. They noted that only four studies had examined how Facebook relates to learning outcomes and found positive impacts on learning outcomes such as improvement in English writing skills, knowledge, and vocabulary.

Technology-based interventions play an important role in assisting students with disabilities to meet the intensified demands of the general education curriculum (Bryant & Seok, 2016). The combination of audio, video, text, and other media available in the digital learning environment has the potential to provide students with a range of abilities and disabilities greater access to curricula and learning opportunities and additional ways to demonstrate their understanding when multiple options for student expression are made available (Bruce et al., 2013). These advantages cannot be realized without attention to the accessibility of technology-based learning systems and strategies. Despite well-established technological standards that facilitate physical and sensory access and decades of civil rights and educational legislation requiring equal educational opportunity, elementary and secondary students with disabilities are routinely presented with online learning systems and content that are not accessible (Center for Online Learning for Youth with Disabilities, 2012; Hashey & Stahl, 2014).

Technology is increasingly being used to assist students in developing non-cognitive competencies important to academic success such as critical thinking, problem-solving, collaboration, the development of self-awareness, impulse control, executive function, and working cooperatively (Bandura, 2001; Hove, 2011). For example, evidence is accumulating that suggests virtual environments and games can help increase empathy, self-awareness, emotional regulation, social awareness, cooperation, and problem solving, which are also important to academic success (Boyle, Hainey, Connolly, Gray, Earp, Ott, & Pereira, 2016; Reardon, 2015).

Rice and Carter (2016) indicate that little research has been done regarding how to best serve students with disabilities and other diverse populations in online learning settings, and only a few states have addressed these concerns through policy or guidance documents (Basham, Stahl, Ortiz, Rice, & Smith, 2015). The Center for Online Learning for Students with Disabilities (2012) recommends that materials and systems be designed from the outset with the needs of students with disabilities in mind and incorporate principles of Universal Design for Learning (UDL) to meet all students' needs. Some researchers have suggested that since the online learning environment places increased demands on the learner, including goal setting, problem-solving, and determination, students who struggle, including those with disabilities, should be provided with opportunities to improve their self-regulation learning skills in order to decrease attrition (Barbour & Mulcahy, 2004; Cavanaugh, 2007; Friedhoff, 2015; Rice & Carter, 2016).

Technology mediated teaching to promote personalized learning requires that teachers adopt new teaching practices. A U.S. Department of Education commissioned meta-analytic

review of K-12 instruction (2010b) indicated that the effects of "blended online instruction," where a teacher uses online tools as part of instruction, were strongest when they included different curriculum materials, pedagogy, and learning time in treatment than pure face-to-face conditions.

So-called "flipped classrooms" can maximize classroom time for small group and one-on-one instruction by providing multimedia lectures and content as homework. Still, this reliance on technology at home brings to light important issues of inequity. The Council of Economic Advisers indicates that approximately 55% of low income children under the age of 10 in the United States lack internet access at home. In addition, 83% of low-income households report that their children's schools expect them to have access to the Internet at home, but less than half of households below the poverty line have the service (Brock, 2016).

The digital divide has evolved beyond issues of access to include inequalities in technology skills and awareness for people of color, the economically disadvantaged, and other marginalized groups (Dolans, 2016; Rogers, 2016; Schradie, 2011; Subramony, 2007, 2014). Moreover, those who are unable to use technology today are at an even greater disadvantage because of the central role technology plays in society at large (Conole, 2012).

Career and Technical Education and Other School-based Career Preparation

Research on high quality career and technical education (CTE) programs suggests that it is a valuable strategy for improving students' college and career readiness and increasing transition into postsecondary education (CCRSC, 2013; Castellano, Sundell, Overman, Richardson, & Stone, 2014; Dougherty, Petrilli, & Shaw, 2016). A high quality CTE program, referred to as a program of study within the Carl D. Perkins legislation (2006), is defined as one that:

> Incorporates secondary education and postsecondary education elements; includes coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, nonduplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education; may include opportunity for secondary education students to participate in dual or concurrent enrollment programs or other wats to acquire postsecondary education credits; and leads to an industry recognized credential at the postsecondary level or an associate or baccalaureate degree. (Perkins IV, Section 122[c][1][A])

One quasi-experimental study of CTE secondary school programs offering a program of study (POS) consistent with the Perkins definition found that POS students graduated with more CTE credits which contributed to higher graduation rates (Castellano, Sundell, Overman, Richardson, & Stone, 2014). In another study, CTE participation was found to increase students' likelihood

of graduating from high school, enrolling in a two-year college, obtaining employment, and earning higher wages (Dougherty, Petrilli, & Shaw, 2016).

Research shows that youth with disabilities tend to lag behind their peers in career and post-secondary readiness (Faas, D'Alonzo & Stile, 1990; Test, Smith, & Carter, 2014). However, a recent study suggests that when students maintain at least a C+ GPA and have taken high-level math and science courses as well as vocational courses that lead to an occupational concentration or professional certification, they are able to achieve similar, and in some cases, greater success than college goers (Hull & Dillon, 2016). The findings from this study are consistent with prior research on students with disabilities which shows that students taking a Career and Technical Education (CTE) course of study are more likely to attain employment later in life (Baer et al., 2003; Harvey, 2002; Wagner, Newman & Javitz, 2015). Rabren, Carpenter, Dunn, and Carney (2014) analyzed post-school outcome data from Alabama and found that "…participation in career technical education improved students with learning or intellectual disabilities' post-school employment outcomes after they exited high school, thereby providing them a means to escape poverty" (p. 35).

While highly valuable unto itself, opportunities for career preparation within secondary schools must not be limited to participation in Career and Technical Education programs of study (CCSSO, 2014). A 2014 CCSSO Taskforce report recommended that state education leaders partner with the employer community to design career pathways for secondary students that align with state and local workforce needs, provide meaningful work-based learning and career exposure, and enable students to gain skills and industry recognized credentials. All students also need ongoing career guidance and career development skills-building activities starting in middle school to inform career and academic planning and build career readiness competencies (CCSSO, 2014; Solberg, Wills, Redmond, & Skaff, 2014).

Research suggests that students with disabilities who participated in a program of study that includes (a) a career major (i.e., sequence of courses based on occupational goal); (b) cooperative education (i.e., combines academic and vocational studies with a job in a related field); (c) school-sponsored enterprise (i.e., involves the production of goods or services by students for sale to or use by others); and (d) technical preparation (i.e., a planned program of study with a defined career focus that links secondary and postsecondary education) were 20% more likely to be engaged in post-school employment than students not involved in such a program of study (Shandra & Hogan, 2008). Rigorous studies of the Career Academies model indicate that combining education and work experience has a significant impact on students' future employment outcomes (Kemple, 2008). In a recent study of perceptions of school- and work-based preparation experiences amongst racially and ethnically diverse low-income graduates, respondents highlighted the importance of preparation experiences in overcoming structural and contextual challenges to obtaining meaningful work (Kenny et al., 2016). Various

strategies for career preparation are explored in more depth in Chapter 2: Career Preparation and Work-based Learning.

Individualized Learning Plans

Individualized learning plans (ILPs) are one recommended and widely used strategy to increase students' career readiness while also personalizing the learning process for all students (CCSSO, 2014). ILPs are a foundational component of personalization efforts intended to help students plan for their future under the guidance of adults who know and care about them. Solberg et al. (2012) reviewed the ILP process and some preliminary findings from previous research (Solberg et al., 2010; Budge et al., 2010). Solberg and colleagues define ILPs as follows:

- A document consisting of: (a) course taking and post-secondary plans aligned to career goals; and (b) documentation of the range of college and career readiness skills he/she has developed.
- A process that enhances the relevance of school and out-of-school learning opportunities, and provides the student access to career development opportunities that incorporate self-exploration, career exploration, and career planning and management skill building activities (Solberg et al., 2014).

A research report by Solberg, Wills, Redmond, and Skaff (2014) concluded that ILPs should be considered a promising practice for youth with and without disabilities based upon the results of focus groups and surveys with educators, families, and students. As Solberg and colleagues explain:

> ILPs are perceived as helping youth learn the relevance and usefulness of their academic learning opportunities. There is evidence that students are selecting more rigorous courses, setting higher career aspirations, and, consequently, seeking postsecondary programs that will lead to higher future wage earnings. The evidence also indicates that youth with disabilities are choosing to pursue a regular education diploma rather than an alternative diploma in order to pursue their career goals (p. 2).

Using correlational survey research, Solberg and colleagues found that youth who reported more engagement in ILPs had better academic performance and stress and health management, and career decision-making readiness through direct effects on goal setting, academic motivation, and academic self-efficacy (Solberg et al., 2014; Solberg, Howard, Gresham & Carter, 2012). Given the lack of experimental research design, Solberg et al.(2018) are unable to demonstrate a causal link between participation in ILPs and college and career readiness indicators; however they recommend further examination of the theory that when all learners receive access to quality ILP activities delivered from a caring and encouraging adult, this leads to learners identifying career and life goals. Identifying goals is followed by their

seeking out learning opportunities that could include education or work-based learning experiences. As a result of proactively engaging in these learning opportunities, learners demonstrate stronger academic performance outcomes, seek out and complete a postsecondary credential, and eventually secure higher paying career opportunities (Solberg et al., 2018).

States utilizing ILPs must consider the relationship between the ILP and the Individualized Education Program (IEP) which is mandated under federal law for students who qualify for special education services (Solberg et al., 2014). Solberg and colleagues explain their findings as follows:

> In states that have mandated ILPs, the primary expectation is that youth with disabilities will develop an ILP. This decision carries with it the assumption that, wherever possible, youth with disabilities will participate in a mainstream, integrated curriculum and will be able to obtain a standard high school diploma. State special education staff involved in the roll out of ILPs perceive ILPs as adding value to the IEP process by making IEP meetings more efficient and improving their overall quality. In addition, they believe that ILPs increase cross-sector and cross-departmental collaboration, increase course taking by youth with disabilities in integrated classes, and increase their exposure to career development experiences (p. 2-3).

Qualities of the Learning Environment

In order to improve learning for every student, education systems must provide a safe and supportive school environment and regularly examine additional unmet needs in addition to providing a well-rounded curriculum and appropriate technology (Aspen Institute Education & Society Program & CCSSO, 2017). The importance of K-12 school climate on youth outcomes has been increasingly recognized over the last three decades (Caldarella, Shatzer, Gray, Young, & Yuong, 2011). School climate has been shown to influence grade point average, standardized test scores, reading levels, academic writing, and school adjustment (Brand, Felner, Seitsinger, Burns, & Bolton, 2008; Garrison, 2004; Pritchard et al., 2005). It has also been associated with reduced incidence of misbehavior (Aveyard et al., 2004; Brand et al., 2008; Gottfredson, Gottfredson, Payne, & Gottfredson, 2005; Sprott, 2004) and increased optimism, academic self-esteem, and student aspirations.

Berkowitz, Moore, Astor, and Benbenishty (2016) conducted a research synthesis of 78 studies dating back to 2000 on the effects of school and classroom climates on academic achievement among school-age children. They found that although significantly different definitions and measurements of school climate had been used, positive school and classroom climates mitigate the negative effect of poor socioeconomic status background on academic achievement.

According to the National School Climate Council (2007):

> A sustainable, positive school climate fosters youth development and learning necessary for a productive, contributive, and satisfying life in a democratic society. This climate includes norms, values, and expectations that support people feeling socially, emotionally and physically safe. People are engaged and respected. Students, families and educators work together to develop, live, and contribute to a shared school vision. Educators model and nurture an attitude that emphasizes the benefits of, and satisfaction from, learning. Each person contributes to the operations of the school as well as the care of the physical environment. (p.4)

With regard to relationships, the National School Climate Center indicates that having "safe, caring, participatory and responsive school climates tend to foster a greater attachment to school and provide the optimal foundation for social, emotional, and academic learning for middle school and high school students" (Thapa, Cohen, Higgins-D'Alessandro, & Guffey,.p. 7). They found that student perception of teacher-student support and student-student support was positively associated with self-esteem and grade point average and negatively associated with depressive symptoms. As an extension of this point, Higgins-D'Alessandro and Sakwarawich (2011) found that students with disabilities who had Individualized Education Programs (IEPs) were only able to benefit from the positive school climate if they felt included and respected by other students.

Inclusion

A sense of belonging and school satisfaction are central for all students and have been found to be related to academic outcomes among students with and without disabilities (McMahon et al., 2016). Therefore, it is important to understand how various inclusive practices relate to academics and other school experiences. The Individuals with Disabilities Education Improvement Act (IDEIA; 20 U.S.C. § 1400 2004) and its predecessors call for students to receive the general curriculum with appropriate supplementary aids, services, and supports in the least restrictive environment and participate with nondisabled peers to the maximum extent appropriate. School inclusion suggests that all students, including students with disabilities, are full members of the school community and are entitled to equal access to social and academic opportunities (Keys, McMahon, & Viola, 2014).

McMahon, Keys, Berardi, Crouch and Coker (2016) cite a growing body of research illustrating the impact of school policies and environments on students' academic and psychosocial outcomes, including the relationship between inclusion and improved academic and social outcomes among students with disabilities. Although school inclusion may be particularly important for low-income youth of color with disabilities, there is a dearth of research on the inclusion of multiple marginalized populations (Keys et al., 2014). McMahon et al. (2016) suggest that school inclusion is defined by organizational, academic, assessment and planning,

and social practices. In a study of these factors, the authors found that organizational inclusion as well as assessment and planning were associated with greater school belonging and school satisfaction; academic inclusion was associated with higher academic achievement, school belonging, and school satisfaction; and social inclusion was associated with higher academic achievement and school belonging.

With funding by the U.S. Department of Education, Jorgensen and colleagues (2009) identified 12 best practices for inclusion and 109 indicators of these practices based on a literature review; visits to schools striving to be inclusive; and conversations with youth, families, and colleagues from around the country. Some of the practices that emerged repeatedly were: leadership support for the alignment of special and general education curriculum; ongoing assessment of student strengths, weaknesses, and needs; curriculum and instruction that enables full participation and progress; and inclusion outside the classroom to promote relationships between students with and without disabilities.

Integrating Social, Emotional, and Academic Development

There is widespread consensus that schools must adopt social and emotional development alongside academic development as their mission (Jones & Kahn, 2017). With its emphasis on a well-rounded education, the Every Student Succeeds Act has elevated students' social and emotional development as priorities for the U.S. education system (Center for American Progress, 2017). In its interim report, the National Commission on Social, Emotional, and Academic Development led by the Aspen Institute highlights what it has learned so far about how to support social and emotional development in schools. The Commission has found:

> Multiple instructional strategies can be used to support students' social and emotional development, including specific programs, integration into classroom lessons, and opportunities such as project-based learning and internships that require students to practice these skills. The common factor is that all approaches should be implemented intentionally and that students should have opportunities to explicitly learn about and apply social and emotional skills. Specific, stand-alone programs and interventions that focus on social and emotional skills development have been shown to improve behavior and academic performance, and are often a first step for educators seeking to comprehensively support their students. More work is needed, however, to facilitate the integration of social and emotional development into academic instruction. (Aspen Institute, 2018, p. 10)

Safety & Bullying Prevention

The National School Climate Center (2012) describes the growing interest and recognition of school climate reform as a data-driven evidence-based strategy that supports safer more, supportive, and civil K-12-schools both in the United States and worldwide. Feeling safe

in school is fundamental to effective teaching and learning. Unfortunately, school violence, bullying, and harassment are pervasive, affecting approximately 25% of all students (Birkett, Espelage, & Koenig, 2009; Cohen, 2006; Devine & Cohen, 2007). Moreover, bullying today extends beyond the brick and mortar classroom online to the virtual school, where at least one in three adolescents reported being seriously threatened online, and 60% of teens said they have participated in online bullying (National School Climate Center, 2012).

Studies of bullying prevalence show that youth with a variety of different disability types experience higher levels of bullying perpetration and victimization than their peers without disabilities (Carter & Spencer, 2006; Cummings et al., 2006; Mishna, 2003; Rose, Monda-Amaya, & Espelage, 2011). These victimization rates are one to one-and-a-half times higher than the national average (Blake, Lund, Zhou, Kwok, & Benz, 2012). Others studies reflect that students with disabilities are two to four times as likely to be bullied (Hartley, Bauman, Nixon, & Davis, 2015).

A number of studies suggest that bullying prevention programs in general should promote prosocial attitudes and behaviors including caring, empathy, and willingness to intervene in bullying situations to reduce the number of students, including those with disabilities, who experience victimization (Espelage, Rose, & Polanin, 2015). Because social emotional learning programs and Positive Behavioral Interventions and Supports (PBIS) have shown preliminary effectiveness, researchers suggest that schools consider integrating adapted forms of social emotional learning programs within school-wide PBIS to address bullying involvement among adolescents in high schools (Bradshaw, Bottiani, Osher, & Sugai, 2014; Domitrovich et al., 2010).

Studies have also recommended conducting behavioral and emotional screening in tandem with school-wide bullying assessments to aid in the identification of students who may require more intensive individualized support services to reduce bullying (Blake, Banks, Patience, & Lund, 2015; Kamphaus, DiStefano, Dowdy, Eklund, & Dunn, 2010; Stiffler & Dever, 2015). Special educators should provide at-risk students with social skills training on emotional regulation and school psychologists with more intensive counseling on emotion management and conflict resolution skills to reinforce the social skills instruction offered in classrooms (Blake, Zhou, Kwok, & Benz, 2016). Rose and Gage (2016) recommend that IEP teams and special education service providers prioritize functional and behavioral skill acquisition in the IEP and provide youth with disabilities with direct instruction focused on social and communication skill acquisition.

The National School Climate Center (2012) indicates that school safety concerns are best addressed by building strong school communities with respectful and trusting relationships among and between teachers, students, parents, school staff, and the surrounding community.

Access to Effective Teachers

Teacher quality continues to be recognized as a significant factor in student achievement (Goe, 2007). The Every Student Succeeds Act (ESSA) of 2015 requires that states take actions to ensure that low income and minority students are not "taught disproportionately by ineffective, inexperienced, or out-of-field teachers" (Aspen Institute Education & Society Program & CCSSO, 2017, p. 19). Defining teacher quality and effectiveness continues to be a challenge due to inconsistent findings across studies of how different teacher characteristics and qualifications impact student outcomes (Goe, 2007). Studies of the effect of teacher qualifications (e.g. degrees and certifications) in mathematics show a consistent effect on student achievement in math; however, research on teacher qualifications in other academic subjects has not yielded similar findings (Goe, 2007). Research also indicates that teachers' effect on student achievement scores increases during their first four or five years of teaching as they become more experience; however, additional years of experience beyond five years yields no additional benefits to students (Goe, 2007).

The National Comprehensive Center for Teacher Quality's framework (Goe, 2007) for defining teacher quality has three strands: qualifications described as "teachers' coursework, grades, subject matter education, degrees, test scores, experience, certification, credentials, evidence of participation in continued learning" (p. 10); characteristics described as "attributes and attitudes of teachers as well as immutable (or assigned) characteristics such as race and gender" (p. 10); and practices described as "what they actually do in the classroom with their students including instructional and classroom management practices, interactions with students, and performance of tasks" (p. 10-11).

Research studies have examined an extensive array of teacher qualities and practices in terms of how they contribute to student engagement and outcomes. Some of these qualities and practices include teacher support and student engagement strategies; teacher professional development and implementation of Universal Design for Learning principles; teachers' knowledge and use of technology, including knowledge of assistive technology; and collaboration among teachers.

Teacher Support and Student Engagement Strategies

While both environmental challenge and environmental support are important to student engagement, recent studies suggest that environmental support may be more so. Shernoff, Ruzek, and Sinha (2016) investigated the linkage between the quality of the learning environment and the quality of high school students' experiences and found that environmental complexity predicted student engagement and sense of classroom self-esteem. The researchers noted, however, that environmental support showed a stronger relationship with student engagement than environmental challenge, thereby suggesting that supportiveness in the environment alone may boost engagement.

Several other recent studies highlight the importance of environmental support, particularly teacher support. Shernoff et. al (2016) found that environmental support had a positive effect on student engagement and that engagement had a positive effect on perceived learning, but environmental challenge did not have a significant effect. Environmental support of student motivation and positive relationships were each found to exert an effect on learning as transmitted by student engagement, with motivation being rated highly when the learning environment was responsive to students' background, goals, interests, and needs. Because the students felt respected and well regarded; student-teacher and student-student rapport was positive; and praise, positive regard, empathy, and encouragement were evident in communications, students perceived activities as interesting and enjoyable, thereby increasing their concentration. When students felt engaged in this way, they also reported higher degrees of learning. Shernoff, Ruzek and Sinha (2016) noted that these findings were consistent with prior studies indicating that self-perception of autonomy or intrinsic motivation, relatedness, and competence were associated with greater engagement and satisfaction and that teachers play a vital role in facilitating engagement and motivation.

Shernoff, Ruzek, and Sinha (2016) report that environmental challenges associated with student engagement include "opportunities for experimenting and solving meaningful problems (Bransford, Brown, & Cocking, 1999), classroom structure (Hospel & Galand, 2016), lesson demands (Goetz et al., 2013), high expectations for student accomplishment (Rubie-Davies, Peterson, Sibley, & Rosenthal, 2015), and relevance of school activities to students' lives and goals (Shernoff, 2013). Environmental supports associated with student engagement include emotional support from the teacher (Cooper, 2014), supportive relations with the teacher (Skinner & Pitzer, 2012) and peers (Ruzek et al., 2016), teachers' autonomy support (Hospel & Galand, 2016; Reeve, 2006), peer interactions (Allen et al., 2011), and a supportive relational environment (Roorda et al., 2011).

Universal Design for Learning

To be successful at engaging all learners and to communicate the standards-based curriculum to specific student populations, teachers need to be able to effectively address learning challenges, eliminate learning barriers in the environment, establish learning goals, and monitor student progress (Coyne et al., 2006). According to Jimenez, Graf, and Rose (2007) and Ribuffo and Smith (2014), Universal Design for Learning (UDL) is one approach to teaching and learning that can make standards-based curricula more accessible to diverse learners regardless of ability, learning preference, language, culture or socioeconomic background.

The Center for Applied Special Technology (CAST) defines UDL as a framework that addresses the primary barrier to fostering expert learners within instructional environments: inflexible, "one-size-fits-all" curricula. Rose and Meyer (2015) state that "barriers to learning are not, in fact, inherent in the capacities of learners, but rather arise in learners' interactions with inflexible educational goals, materials, methods, and assessments." As a framework, UDL uses

multiple means of representation, expression and action, and engagement to plan curriculum for presumed and known levels of learner variability (CAST, 2011b).The principles are based on brain research on cognition and learning, which has shown that individuals process information in varying ways.

UDL has nine guidelines and 31 “checkpoints” (Hall, Meyer, & Rose, 2012) educators can refer to as they design lessons to proactively incorporate strategies that support academic and affective needs of students (Israel, Ribuffo, & Smith, 2014; Rao & Meo , 2016). Rao and Meo (2016) describe these checkpoints as defining how to provide physical access, cognitive access, and options for engagement. The checkpoints are supported by research evidence and represent specific practices that were effective in reducing barriers to learning identified by experimental research, scholarly review, and expert opinion (National Center on Universal Design for Learning, 2011).

Teachers should have the knowledge and skills to understand the academic skills, including functional academic skills, required for students to participate in a particular program of study, access the general curriculum, and obtain a high school diploma. At the systems level, teachers must be prepared with the knowledge and skills to implement the principles of Universal Design for Learning (UDL) to support students with disabilities in the general curriculum, work with administrators and other school personnel to ensure that students with disabilities are successful in academic settings, and identify a process for students to be successful and supported in a specific program of study (Rowe et al., 2013). This includes preparing teachers with information about how to (a) differentiate instruction; (b) provide learning strategies and meta-cognitive strategy instruction; (c) develop relationships with general education teachers, including career and technical education teachers, to support students with disabilities; and (d) identify needed accommodations and assistive technology (AT) that can support students with disabilities in academic settings (ibid).

Although the research on UDL has been heavily criticized for not including enough empirically valid studies (Edyburn, 2010; Rao et al., 2014; Ok, Rao, Bryant & McDougall, 2016), the research base on how UDL can be applied to curriculum and instruction has grown over the past decade. In their meta-analysis, Mangiatordi and Serenelli (2015) found that only 19 of 80 UDL abstracts examined included quantified empirical results from UDL studies and identified positive outcomes from interventions. Outcomes included improvements in: teacher preparation; student performance on assessments and standardized tests; student knowledge and appreciation; website accessibility; personalization of the classroom environment; and social relationships between students. The researchers concluded that although the research evidence about the effectiveness of the UDL framework is limited, it is growing.

Three studies reviewed by Rao, Ok, and Bryant (2014) examined the outcomes of training instructors to implement UDL into curriculum. Researchers found that curriculum redesign was especially positive for increasing the social interaction, participation, completion of

work, grades, and test scores of students with disabilities (Dymond et al., 2006). Teacher candidates and participants reported that using UDL principles frequently benefited their lesson plans and students (McGuire-Schwartz & Arndt, 2007). A one-hour training on UDL resulted in a considerable increase in the ability of general and special education teachers to include UDL-based modifications in lesson plans to address the needs of students with a mild or severe cognitive disability (Spooner et al., 2007). Rao, Ok, and Bryant concluded that use of UDL principles is beneficial for students and educators. Nonetheless, they cautioned that the evidence should be viewed as preliminary until more standardized and rigorous research is available.

In a subsequent review of research, Al-Azawei, Serenelli, and Lundqvist (2016) found that the majority of studies reviewed showed that a UDL-inspired course design positively affects user perceptions and/or academic performance (Hall, Cohen, Vue, & Ganley, 2015; Coyne, Pisha, Dalton, Zeph, & Smith, 2012; Kennedy, Thomas, Aronin, Newton & Lloyd, 2014).

Technology and Assistive Technology

As previously mentioned, technology can improve and enhance learning by: enabling personalization of learning experiences to make them more engaging and relevant (Redding, 2016); helping to organize learning around real world challenges and project-based learning; providing a way to tap into learning opportunities available in museums, libraries and other out-of-school settings; and helping learners pursue their passions and personal interests, which teaches them exploration and research skills and helps instill a life-long learning mindset (U.S. Department of Education, 2017). Technology is also critical to assessing learning. Through embedded assessment during the learning process, educators can access student progress and learning throughout the school day, which allows them to adapt instruction to personalize learning or intervene to address particular learning shortfalls (Spector et al., 2016).

Technology-supported assessments and augmentative and alternative communication (AAC) devices have been shown to be effective for students with and without disabilities (Bryant and Seok, 2016). A number of studies have demonstrated the positive impacts of AAC on communication growth for a variety of populations, including individuals with autism spectrum disorders (Ganz, 2015; Ganz et al., 2011; Schlosser & Koul, 2015); severe or profound intellectual developmental disabilities (Mirenda, 2014; Roche, Sigafoos, Lancioni, O'Reilly, & Green, 2015; Snell et al., 2010); challenging behaviors (Walker & Snell, 2013); and speech disorders that require multimodal supplementation (Hanson, Beukelman, & Yorkston, 2013). Research has also demonstrated that students with multiple and severe disabilities who use AAC systems can learn literacy skills (Ahlgrim-Delzell, Browder, & Wood, 2014; Ainsworth, Evmenova, Behrmann, & Jerome, 2016; Kliewer et al., 2004; Ryndak, Morrison, & Sommerstein, 1999).

Research consistently identifies teacher knowledge as an important factor in the usage of assistive technology (AT) with students with disabilities (Alper & Raharinirina, 2006; Lee & Vega, 2005; Ludlow, 2001). Consistent with studies conducted over the past 20 years, educators identified the need for additional professional development; better access to technology; and the lack of funding as top barriers to more widespread AT use (Okolo and Diedrich, 2014). Given the relative lack of AT in students' IEPs, Bouck (2016) concluded that knowledge of AT must extend beyond special educators to include general educators and administrators who are also present in IEP meetings (see also Gargiulo, 2012; Jeffs & Banister, 2006).

Despite the potential promise that technology brings and the influx of technology in the classroom, research indicates that teachers have been slow to transform how they teach, and technology implementation remains a challenge (Inan & Lowther, 2010; Tondeur, van Braak, Ertmer, & Ottenbreit-Leftwich, 2016). Schools and educators across the country continue to wrestle with the changing role of teachers, how to balance flexible and "personalized" models with state and federal accountability requirements, and the deeper cultural challenge of changing educators' long-standing habits and routines (Ertmer & Ottenbreit-Leftwich, 2013; Herold, 2016; Moeller & Reitzes, 2011).

Perhaps related to the slow teacher uptake of technology, several studies suggest that students with disabilities are not receiving adequate technology devices or services (Bouck, Maeda, & Flanagan, 2011); Quinn, Berhmann, Mastropieri, Bausch, Ault, & Chung, 2009; Bouck and Flanagan, 2015; Bouck, 2016). Using NLTS2 data, Bouck and Flanagan (2015) found that fewer than 25% of students with low-incidence disabilities reported receiving AT in school, although there were large discrepancies across the individual disability categories. In a subsequent study using NLTS2 data across all disability categories, Bouck (2016) found that only 7% of secondary students with an IEP reported receiving AT within the last year. Less than 20% of students in all other disability categories reported currently receiving AT. Students with more high incidence disabilities (e.g., learning disabilities and emotional/behavior disorders) reported the lowest prior and current rates of AT access. Only two disability categories had more than 50% of students reporting they received AT: students who are deaf–blind (73%), and students with visual impairments (62%).

Findings related to underutilization are particularly troubling given that instructional benefits associated with the use of AT have been reported for students with visual impairment (Rush, 2015); physical, visual, severe, and multiple disabilities (Coleman & Cramer, 2015); high-incidence disabilities (Bouck, Meyer, Satsangi, Savage, & Hunley, 2015; Bryant et al., 2015); and low incidence disabilities (El Zein et al., 2016; Vedora & Stromer, 2007). Using technology to teach academic skills has been recognized as a research-based practice after meta-analyses conducted by the National Technical Assistance Center on Transition and the What Works in Transition Synthesis Project. In addition, Bouck, Maeda, and Flannagan (2012) found that students with high-incidence disabilities who reported receiving assistive technology in

school had more positive post-school outcomes in terms of a paid job, wages, and participation in postsecondary education.

Reengagement Strategies for Students Who Become Disconnected

In the United States, 1.8 million young people between the ages of 16 and 21 who have not finished high school are not enrolled in school, and another 400,000 drop out of high school each year (National League of Cities, 2013). Nationally, about one third of students fail to graduate from high school, and graduation rates in some communities are much lower. Students of color have just over a 50% chance of graduating (Weeter & Martin, 2011). Students who drop out find limited opportunities for career and life success, facing reduced employment prospects; lower lifetime earning potential; higher rates of incarceration; and even reduced health. Significant attention has been paid to reducing the number of students who drop out of school through both dropout prevention and dropout re-engagement strategies.

There has been considerable attention given to the reasons young people drop out of school. Doll, Eslami, and Walters (2013) present data from seven nationally representative studies spanning 50 years and examining reasons students drop out of school, including an analysis of "push," "pull," and "falling out" factors in students' decisions to drop out. Accordingly, there has been much attention paid to dropout prevention strategies in schools. Pyle and Wexler (2011) summarized research on evidence-based dropout prevention practices for youth with disabilities. In alignment with previous research, and within a framework established by the Institute for Educational Science (Dynarski, Clarke, Cobb, Finn, Rumberger, & Smink, 2008), they recommend that schools: identify students most at risk of dropping out; provide at-risk students access to adult advocates; provide academic support for students who are struggling; implement positive behavioral interventions and support; provide rigorous and relevant instruction for workplace and higher education via career pathways; and personalize the instruction and learning environment to meet the needs of individual and small groups of students.

In the past decade, education and community leaders have begun to focus with greater attention and urgency on reconnecting those young people who have dropped out of school prior to completing high school. A growing trend across the country, re-engagement centers seek to ensure all students complete high school or its equivalent and make solid connections and plans as they move toward adulthood into postsecondary education and training. These centers may be located in schools or districts, government agencies, or community-based organizations and may be publicly or privately funded; however, all adopt similar strategies to reconnect out-of-school youth to education and training opportunities.

Rennie-Hill, Villano, and Feist (2014) profiled ten re-engagement centers providing opportunities and options to ensure disconnected youth can re-engage with education; they

describe how such centers get started, various models for their organization and service delivery, and emerging lessons from the field. A report by Weeter and Martin (2011) focusing on improving or expanding options for struggling students and out-of-school youth highlights key areas of programming, policy, and system building at the local and state levels, including successful school and district policies, multiple pathways and education options strategies, and re-engagement center models. The literature on re-engagement strategies emphasizes that in order to reconnect out-of-school youth, one must look beyond schools to focus on the individual and what s/he needs to re-engage and be successful in the future (Rennie-Hill, Villano, & Feist, 2014; Weeter & Martin; 2011). As such, re-engagement strategies employed by schools are most effective when deployed in concert with broader community-wide strategies.

Rennie-Hill, Villano, and Feist (2014) identify three core functions of re-engagement efforts: outreach, assessment, and referral. Re-engagement may also include opportunities for credit recovery, tutoring, employment preparation, or other additional services. Outreach includes going to out-of-school youth directly and inviting them back, often repeatedly. Assessment includes finding out what a student's experience with school has been, what progress toward graduation they have made, and what programming is appropriate to get the student back on track to graduate. Assessment may also include focus on a range of social and emotional issues as well as career readiness. Referral includes finding a good school placement for a student and may include referral to appropriate social/emotional services as well. The above re-engagement functions can be performed by schools, districts, other government agencies, or community-based organizations (or a combination of these). They can be performed in a physical re-engagement center, in a district re-engagement office, or through an online virtual re-engagement system.

Ideally, a disconnected young person is referred to an education program appropriate to his/her needs, generally not simply a return to the same education program that failed to work for the student in the past (Rennie-Hill, Villano, and Feist (2014). A strong portfolio of education options for struggling and returning students offers all young people a variety of high-quality options connecting to education and career development opportunities. Such options should include high-quality alternative schools and programs, competency-based and self-paced models, programs for parenting teens, juvenile justice re-entry programs, schedule flexibility, dual-enrollment options, GED Plus models, and career and technical education models. Martin and Halperin (2006) document how Portland Public Schools has created a portfolio of high school options in close collaboration with community-based organizations and the local community college. Portland's education options offer a variety of innovative, learner-focused programs and schools designed to, as a group, retain and re-engage students who fall off track.

Jobs for the Future's Back on Track Through College model is designed to re-engage youth ages 16 to 24 who have fallen off-track to high school graduation and helps them get back on a path to postsecondary success. Key elements of the model include: 1) enriched preparation, integrating high-quality college- and career-ready instruction with strong academic and social

supports; 2) postsecondary bridging, building college/career-ready skills and providing informed transition counseling; and 3) first year support to ensure postsecondary persistence and success. Back on Track has been implemented in communities across the country and is demonstrating early indicators of success in improved student outcomes (Allen, 2012).

Postsecondary Success Strategies

Many students struggle to enter and complete postsecondary training due to factors such as poor academic preparation, insufficient student supports, inadequate developmental education courses, or insufficient financial aid; and fewer than 40% of college entrants complete a degree within six years (Bailey et al., 2015). Community colleges, already serving about half of all undergraduates, are being asked to rapidly increase the number of students they graduate. Bailey et al. (2015) argue that to improve student outcomes, community colleges must be completely redesigned. Improving instruction, developmental education, student supports, and overall student experience are important, but they must be accompanied by broader institutional reform.

Roughly one third of students who begin higher education do so without adequate preparation to succeed in college-level courses. That figure is much higher for high school graduates entering community college, about 40% of whom are required to take at least one remedial or developmental education course when they begin. (National Center for Education Statistics, 2013). African American and Latino students and students from low-income backgrounds are overrepresented in developmental education, as are first generation students at public four-year institutions (Jimenez et al., 2016; Xianglei & Simone, 2016).

Unfortunately, traditional developmental education courses do not appear to improve outcomes for underprepared students. What is more, students are often placed in remedial courses based on a single test designed to assess readiness, a practice that has been the subject of increasing criticism. Students who begin postsecondary education underprepared are less likely to successfully complete their education. For students entering community college, those enrolled in one or more remedial courses have a 28% chance of attaining a degree within eight years of high school compared to 36% of their peers not enrolled in developmental education courses (Bailey et al., 2016). Students entering four-year colleges without proper preparation face even tougher odds, with 52% of those enrolled in one or more developmental education course completing their studies versus 78% of their peers not enrolling in these courses. (Attewell et al., 2006).

The Institute of Education Sciences (IES) conducted a comprehensive review of strategies for implementing evidence-based developmental education strategies (Bailey et al, 2016). The IES recommendations include the following:

1. Use multiple measures to assess postsecondary readiness and place students.

2. Require or incentivize regular participation in enhanced advising activities.
3. Offer students performance-based monetary incentives.
4. Compress or mainstream developmental education with course redesign.
5. Teach students how to become self-regulated learners.
6. Implement comprehensive, integrated, and long-lasting support programs.

A study of corequisite remediation suggests it is a more efficient instructional system for new college students who are underprepared academically (Belfield et al., 2016). Belfield and colleagues reviewed the cost-effectiveness of the corequisite remediation model as implemented at 13 community colleges in Tennessee in Fall 2015 (Belfield et al., 2016). With this model, students not prepared academically take remedial academic support at the same time as entry-level college courses. This differs from the traditional approach in which remediation is a prerequisite to college-level courses. The authors use transcript data and information on cost to estimate the net effect of corequisite remediation on completing initial college-level math and writing sequences and find gains in the cost-effectiveness of corequisite over prerequisite remediation.

Guided pathways is another strategy that shows promise for increased postsecondary success. While most colleges allow students to choose from a large number of disconnected courses, an increasing number of colleges and universities are offering guided pathways, which are coherent and clearly structured educational roadmaps to a degree or credential. College students are more likely to complete a degree if they choose an academic program and have a plan early in their college career, have a clear understanding of the courses they need to complete, and receive guidance to help them stay on track with their plan (Bailey, Jaggars, & Jenkins, 2015a).

The Integrated Basic Education and Skills Training (I-BEST) model, developed by the Washington State Board for Community and Technical Colleges to help adult basic skills students succeed in career and technical education programs, is an example of a guided pathway model. The program integrates foundational basic skills instruction with college-level content, and students complete a prescribed sequence of courses aligned with job requirements in the corresponding field (Bailey, Jaggars, & Jenkins, 2015a). A CCRC study found I-BEST students accumulated more college credits and were more likely to earn an occupational certificate within three years than students not enrolled in the program (Zeidenberg, Cho, & Jenkins, 2010). Similarly, MDRC's evaluation of the City University of New York's Accelerated Study in Associate Programs (ASAP), a program offering a wide range of supports and incentives for up to three years while students attend college full-time in a block-scheduled pathway of study within their major, found students in the ASAP program were nearly twice as likely to complete a degree within three years than their peers not enrolled in ASAP (Scrivener et al., 2015). In addition, ASAP produced so many more graduates than standard college services, the cost per graduate was lower in the program.

Postsecondary institutions offer a range of academic programs and services to support the achievement and progress of all students, including disability-specific supports for those who require and request them. These services may include learning assistance centers, writing and other types of study centers, tutoring services, student success courses, and other types of academic assistance (Arendale, 2004; Trammell & Hathaway, 2007). Research studies indicate that student success courses may be a particularly valuable strategy. Multiple studies at both four-year institutions and community colleges have found that participation in student success courses leads to greater academic achievement and persistence among students at least in the short-term (Zeidenberg, Jenkins, & Calcagano, 2007; Karp, Raufman, Efthimiou, & Ritze, 2015).

In their study of students' opinions of student success courses at two community colleges, O'Gara, Karp, and Hughes (2009) found that students valued this type of course both for the information they gained and for the relationships they built with school faculty and staff. Students reported that the course helped them develop both their time management and study skills. One recent study indicates that integrating opportunities to practice skills into student success courses increases student outcomes. Karp and colleagues (2015) evaluated the Bronx Community College (BCC)'s redesigned student success course and found that the majority of students reported using the skills they learned after they completed the course. Compared to students who did not participate, the course participants had higher grades and stronger persistence from one semester to the next.

All students must recognize when they need help, understand where to get it, and then actively follow through (Karp & Bork, 2012; Trammell & Hathaway, 2007). Research indicates that self-advocacy has a significant impact on the success of college students with disabilities (Lombardi, Murray, & Kowitt, 2016). Students with disabilities who could benefit from using disability-related accommodations and supports must take responsibility for formally requesting them from their postsecondary institution and faculty. In addition, they must know how to use and feel comfortable using accommodations in their classes and other settings. Studies have found that receiving assistance with the accommodation process from caring individuals is the most critical factor in college students' success (Graham-Smith & Lafayette, 2004; Balcazar et al., 2012). Newman et al. (2011) noted that approximately 44% of postsecondary students with disabilities accessed generally available student supports and that 50% of students in two- and four-year colleges and more than 30% of those in CTE schools who had not received disability-specific or generally available supports reported the need for help with schoolwork (Newman et al., 2011). Mamiseishvili and Koch (2011) found that students with disabilities who were academically integrated through academic programs like study groups were more likely to persist from their freshman to sophomore year. Likewise, using supports such as tutoring have been found to be beneficial for postsecondary students in the general population (Longwill & Kleinert, 1998; Reinheimer & McKenzie, 2011).

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Career Preparation & Work-Based Learning Experiences

All youth, including youth with disabilities, need full access to career preparation and work-based learning opportunities, such as internships, apprenticeships, work-study, and summer work. The preparation for careers necessitates engagement in a combination of work-based learning and developmentally appropriate skill-building activities that support the ongoing career development process (van Bruinswaardt, Solberg, & Jarukitisakul, 2015). The key to supporting youth throughout the career development process is by facilitating age-appropriate transition assessment to match youth to their desired employment environment (Neubert and Leconte, 2013). Work-based learning experiences critically assist youth in developing their technical work skills and knowledge as well as in making informed choices about their long-term career interests and pursuit of postsecondary education and training (Cease-Cook, Fowler, & Test, 2014). These foundational experiences also develop and hone employability or "soft" skills, including communication, leadership, decision-making, and conflict management skills. Youth must develop and expand these employability skills to secure jobs through their networks and social connections and to succeed in meaningful opportunities available to them in the world of work (Lindsay et al., 2014).

Youth who successfully acquire a combination of technical skills and employability skills through a career development process that includes work-based learning experiences significantly increase their chances of securing meaningful employment after high school (Lindstrom, Doren, & Miesch, 2011; Kluve et al., 2016). Career development and work-based learning experiences can also increase the academic engagement of youth while reducing negative youth outcomes. For example, a review by Mixon and Stephenson (2014) indicates that summer employment opportunities improve the academic achievement of youth while decreasing their risk for engagement in harmful activities, such as drug and alcohol misuse and adverse behavior, including fighting and property damage. Likewise, active participation in employment can help bolster the overall physical and mental health and wellness of youth (Bonnie, Stroud, & Breiner, 2014). For the purposes of this review, the literature on career preparation and work-based learning is organized by the following themes:

- Awareness of and access to career pathways;
- Access to individualized career navigation and career development skill-building;
- Accessible technology for career development and employment; and
- Work-based learning and other meaningful employment experiences.

Awareness of and Access to Career Pathways

Career Pathway Programs

Career pathway programs support efforts of job seekers, including youth, to transition successfully into the workplace and advance in career opportunities as their work experiences expand. All career pathway programs provide a clear sequence of educational coursework and training credentialing that aligns with existing work readiness standards and competencies recognized by the business community (Employment and Training Administration, 2016). Well-developed career pathway programs can help youth earn academic and industry-recognized credentials for high skilled, in-demand jobs in emerging sectors of the American workforce. Critically, these career pathway programs must align the educational offerings of schools with needs of the business community and engage businesses directly in the development of educational programs (Employment and Training Administration, 2016).

Career pathway programs must also offer an efficient, customer-centered approach toward structuring connections among employers, supportive service providers, occupational training, postsecondary education programs, and adult basic education (Employment and Training Administration, 2016). Prior research on career academies indicates that this type of cohesive integration of educational and vocational activities has potential to support career development outcomes for youth (Center for Law and Social Policy, 2014; Kemple, 2008; Vishner & Stern, 2015). All career pathways should ensure active participation by youth with disabilities and their access to the necessary accommodations and supports that facilitate full participation, including in postsecondary education and training. To achieve this, career pathways programs should develop collaborations and partnerships with both general and disability service agencies, such as Medicaid and vocational rehabilitation (VR) (Barker, 2014).

Career and Technical Education

Career and technical education (CTE) training programs support all youth in developing technical and academic skills to obtain employment in high-demand, high-skilled industries, such as STEM, healthcare, and information technology. Schools run these programs both in K-12 education and at the postsecondary education level to prepare youth for the workplace and develop their skills for work competency through hands-on instruction. CTE programs at K-12 and postsecondary schools in the U.S. (including colleges and vocational schools) currently support 12.2 million students (ACTE, n.d.). Studies indicate that youth, including youth with disabilities, who are involved in CTE programs are more likely to graduate and pursue employment as well as postsecondary education and training (Gottfried, Bozick, Rose, & Moore, 2016; Lee, Rojewski, & Gregg, 2016; Plasman & Gottfried, 2016; Wagner, Newman, & Javitz, 2016).

Access to Individualized Career Navigation and Career Development Skill-Building

Career Development Skill-Building

Every youth should have the opportunity to build skills in three career development skill domains (e.g., self-exploration, career exploration, and career planning and management) (Solberg et al., 2018). Self-exploration involves learning about oneself through validated assessments and discovering the ways one can match interests, skills, and values to career opportunities. Career exploration helps young people identify how various career options match their interests, skills, and work preferences and determine what postsecondary education and training they need to pursue careers of interest. Career planning and management is focused primarily on developing employability and decision-making skills and increasing one's capacity to navigate the world of work, not just in the short term but throughout life (Solberg et al., 2018). This skill domain includes academic planning, decision making related to postsecondary pathways, career readiness skills, job search skills, and financial literacy. In each career development skill domain, age-appropriate and ongoing transition assessment is necessary to ensure a stronger match between youth's career interests and their environment (Neubert & Leconte, 2013). In addition, it's important to note that triangulating assessment data using multiple methods (e.g., formal and informal assessments) by several stakeholders (e.g., employers, VR) strengthens the quality of the career match between youth and their environment (Leconte, 1998; Neubert & Leconte, 2013).

Individualized learning plans (ILPs) are a promising strategy for engaging youth in career development skill-building (Solberg, Wills, Redmond, & Skaff, 2014). Skaff and Kemp (2016) define an ILP as "an approach to assist students in successfully transitioning by helping them explore postsecondary options, identify goals for college and/or a career, and develop the skills needed to achieve their goals through course alignment and extracurricular activities." This approach incorporates a process that integrates activities that build youth's skills in self-exploration, career exploration, and career planning and management. As of 2017, more than 40 states and Washington, DC highly encourage or require high school students to use ILPs as an integral part of their educational and transition planning. Some states also require their middle school students to develop ILPs that can receive further refinement during high school (ODEP, n.d.).

Self-Exploration

Self-exploration is a first and vital step for facilitating career awareness and career exploration among all youth. Youth must take the opportunity to complete self-assessment tools and discuss these assessments with adults to enable them to identify their own interests, aspirational goals, and work-related beliefs and values (Arrington, 2000). Cease-Cook et al. (2015) suggest that all youth have expanded opportunities during middle school to complete career interest inventories to identify their own career interests. Completion of these career inventories during middle school better prepares youth to participate actively in meaningful work-based experiences throughout high school and upper middle school grades (i.e., seventh and eighth grade). Many career self-assessment activities require schools and youth service agencies to purchase specialized materials, tools, and assessment instruments (Solberg, Wills,

Redmond, & Skaff, 2014). This means that all youth may have varying levels of access to career exploration resources and that youth who come from lower socio-economic backgrounds may have the most limited access to these activities.

Career Exploration

Career exploration skills enable young people to identify how their interests, values, and skills relate to careers of interest; describe the skills and activities associated with those careers; and identify the post-secondary education or training needed to successfully pursue those careers (Solberg et al., 2018). Various activities promote skill-building in career exploration including informational interviews with employers, workplace visits and tours, job shadowing, career fairs and career days, career camps, hands-on career projects, career-focused mentoring, and other forms of career-related research (NCWD/Youth, 2012). One study found that students who have been actively engaged in career exploration activities have a clear understanding of the career they want to pursue and were able to describe educational pathways aligned to their goal (Solberg, Gresham, Phelps, & Budge, 2010)

Job shadowing provides students with meaningful opportunities to learn first-hand about real world work opportunities by shadowing employees at their worksites (Arrington, 2000; Lozada, 2001; Cease-Cook et al., 2015; Junior Achievement, 2010). While participating in job shadowing activities, students can discover the advantages, disadvantages, and requirements of certain jobs and long-term careers that might interest them (Arrington, 2000). They can also further identify school subjects and post-secondary education and training necessary to be successful in those careers (Solberg, Wills, & Osman, 2012). A survey on job shadowing conducted by the *Junior Achievement Job Shadowing Initiative* (2010) reported that approximately 88-98% of students felt that engaging in job shadowing activities helped them become more aware of career options and recognize the role of educational attainment in pursuing career goals. Students also had opportunities to observe and develop life skills (e.g., speaking professionally, problem solving) through job shadowing experiences (Junior Achievement, 2010).

Work sampling, which is also called job sampling, involves the assignment of work tasks to youth that do not "materially benefit the employer." Engagement on these tasks can enable youth to "spend meaningful time in a work environment to learn aspects of [a] potential job task and soft skills required in the workplace" (Luecking, 2009). Youth in high school can sample different types of school-based jobs based on rotations through career clusters. Teachers can also invite local employers to visit the school and assign youth to perform work tasks (Cease-Cook, et al., 2015).

Career Planning and Management

Career planning and management skills are critical to employability, decision-making, and career navigation throughout life (Solberg et al., 2018). All youth need opportunities to

engage in and develop skills related to academic planning, selecting postsecondary pathways, career readiness, job search, and financial literacy (Solberg et al., 2018).

Employability skills training. Also known as soft skills, career readiness skills, and workforce readiness skills, employability skills constitute a set of transferable core skills that help prepare youth for competitive employment and long-term career success (OCTAE, n.d.; TDE, n.d.). Hart Research Associates (2015) suggests that employability skills include a wide range of knowledge and skills (e.g., communication skills, ethical decision-making skills, teamwork skills), as well as knowledge and skills for a particular field or career. The Skills to Pay the Bills: Mastering Soft Skills for Workplace Success classifies employability skills into six domains, including communication, enthusiasm and attitude, teamwork, networking, problem solving and critical thinking, and professionalism (ODEP, 2011). An extensive review on over 380 employability resources also proposes a set of soft or employability skills for youth ages 15-29 that includes social skills, communication skills, self-control, positive self-concept, and higher-order thinking skills (e.g., problem-solving, critical thinking, and decision-making) (Lippman, Ryberg, Carney, & Moore, 2015).

The research literature indicates that youth demonstrating employability skills attain advantages related to finding, obtaining, performing in, retaining, and advancing a job or career (AIR, 2015; Lippman et al., 2015; Solberg et al., 2012). For example, youth with enhanced social and communication skills may have greater opportunities to secure jobs due to building connections and networking to learn about employment opportunities; therefore, they perform better during job interviews. Lippman et al. (2015) examined the impact of specific employability skills and learned that youth demonstrating cultural sensitivity and learning orientation have greater success in employment.

Social and emotional skills. Core employability skills directly mirror social and emotional learning skills (American Institutes for Research, 2015). The employability skills framework from the U.S. Department of Education's Office of Career, Technical, and Adult Education (OCTAE) resembles that of the Collaborative for Academic, Social, and Emotional Learning's (CASEL) framework (American Institutes for Research, 2015; CASEL, 2015). These interrelated frameworks suggests that Social and Emotional Learning (SEL) practices conducted in school or afterschool programs can facilitate youth development of employability skills. Programs run during afterschool and other time periods that develop employability skills often incorporate leadership development, team-building activities, public speaking, resume workshops, and mock interviews. Additionally, many afterschool programs targeting social and emotional skills focus specifically on employability skills (American Institutes for Research, 2015).

Studies (Cook et al., 2008; Morningstar, Lombardi, Fowler, & Test, 2015) highlight the need for assisting students with emotional and behavioral disorders (EBD) and other disabilities to improve their social and emotional skills. This supports their preparation for developing

employability skills. Students with emotional and behavioral disorders (EBD) refer to those that show a wide array of social, emotional, and behavioral problems and may or may not be eligible for special education services (Cook et al., 2008). Students with EBD generally have difficulties in social skills and competence, leading them to be at greater risk for other important areas of their lives (Cook et al., 2008). The meta-analysis study by Cook (2008) found that social skill training (SST) programs utilizing coaching and modeling approaches are likely to be effective in helping students with EBD develop interpersonal skills that are transferable to employability skills. Also, an empirical study by Morningstar et al. (2015) found that social skills and critical thinking skills are important for students with disabilities to develop career-related soft skills. These skills are transferable to other important skills such as teamwork, problem solving, and professionalism that promote college and career readiness among students with disabilities (Morningstar et al., 2015).

Self-regulation skills. Along with SEL skills, youth need self-regulation skills to assist them in monitoring and controlling their actions, emotions, and thoughts, as well as developing their problem-solving skills. Youth with EBD who are at-risk, disconnected, formerly incarcerated, or in the juvenile justice system have benefited from learning self-regulation skills. Zajac, Sheidow, & Davis (2015) reviewed service systems and evidence-based interventions that support youth with EBD in the juvenile justice system. Their review identified several quality programs, including Check and Connect, the Jump On Board for Success (JOBS), the RENEW (Rehabilitation, Empowerment, Natural Supports, Education, and Work), and the Individualized Placement and Support (IPS). For younger youth, Turner and Conkel (2010) identified the Integrative Contextual Model of Career Development (ICM) as an effective model for building self-regulation skills, particularly focusing on emotional and instrumental support. Youth reported greater employability skills, emotional support, and self-efficacy in achieving their occupational goals (Turner & Conkel, 2010).

Self-advocacy skills. Youth and young adults with disabilities must self-disclose their disability status to receive workplace accommodations and/or accommodations in postsecondary education and training (Lindsay, McDougall, & Sanford, 2013). Learning about legal rights to accommodations in different settings, benefits and limitations of disability disclosure, and how to approach employers about accommodation requests are important tasks for youth with disabilities as they prepare for transition to employment (Lindsay & Sanford, 2013). Although civil rights laws protect youth and young adults from discrimination, disclosing a disability may feel intimidating and uncomfortable for youth with disabilities (Johnson & Joshi, 2014). This may become particularly overwhelming for youth with disabilities that have greater associations of stigma, stereotypes, and biases among society. It can also place extensive cognitive demands on youth with disabilities that affect communication and social interaction (Johnson & Joshi, 2014). Research indicates that young adults with disabilities can benefit from developing explicit plans for how and in what manner they disclose their disability status (McGahey, Waghorn, Lloyd, Morrissey, & Williams, 2016). Depending on the level of postsecondary

education and training and the age of diagnosis, youth and young adults with disabilities may have greater or less comfort with disclosing their disability status (Johnson & Joshi, 2014; Ohl et al., 2017). One study found that youth with disabilities participating in an employment training program reported that they benefited from discussing and practicing disability disclosure and requesting accommodations with program staff prior to worksite placement (Lindsay & Sanford, 2013).

Accessible Technology for Career Development and Employment

Information technology systems, including online-based career information systems, play a significant role in supporting career exploration and development for youth (Solberg et al., 2018). Career information systems help support assessment of career interests and match interests to specific strengths and talents of youth (Solberg et al., 2014). Career information systems also facilitate virtual job shadowing opportunities and help connect youth with potential work-based experiences, such as internship placements.

Southgate, Smith, and Cheers (2016) suggest that new and emerging technologies will increasingly facilitate career exploration and development for youth as technologies (e.g., mobile computing, haptics, and virtual reality) continue to improve and mature. They suggest that these types of technologies can benefit career development in three main ways: motivating and engaging students through more authentic learning associated with specific careers and professions, such as via virtual reality learning of STEM content; facilitating authentic connections to postsecondary education and workplace experiences, such as through simulations of workplace environments; and developing career and postsecondary education "taster" spaces in which youth from broad socio-cultural backgrounds can envision themselves working.

Professionals who facilitate career development and work-based learning opportunities for youth should also ensure that all technology used in the workplace and training settings is fully accessible to people with disabilities (Solberg et al., 2018). This requires training educators, youth service professionals, and others on workplace technology accessibility issues (Burgstahler, 2003). It also requires teaching youth with disabilities to self-advocate for their technology access needs for performing job responsibilities (Burgstahler, 2003). Youth with disabilities must learn how their disability-related challenges affect their use of technology commonly used in the workplace, such as computers and mobility technology. Approximately 5% to 7% of all transitioning secondary students with disabilities use assistive technology (AT), according to an analysis of data from the National Longitudinal Transition Study-2. This AT usage includes mobile technology, adaptive computer equipment, communication aids, audio books, and other equipment (Bouck, 2016).

Work-Based Learning and Other Meaningful Employment Experiences

Active participation in WBLEs during secondary school can improve long-term employment outcomes for youth. In particular, studies show that active participation in WBLEs during high school can significantly improve employment outcomes for youth at risk of dropping out of high school (Bloom, 2010). In addition, studies highlight that active participation in WBLEs by youth with disabilities is particularly a key predictor of their adult employment success in competitive, integrated employment opportunities (Mazzotti, Test, & Mustian, 2012; Luecking, 2009; Luecking & Luecking, 2013; Stodden, Dowrick, Gilmore & Galloway, 2001). WBLEs benefits students with disabilities as a whole, as well as specific groups, such as (but not limited to):

- Students who are blind or low vision (c.f., Karpur, Clark, Caproni, & Sterner, 2005);
- Students classified in high school as having emotional/behavioral disabilities (c.f., McDonnall & Crudden, 2009); and
- Students with intellectual and developmental disabilities, including autistic students (c.f., Test, Smith, & Carter, 2014).

The Workforce Innovation and Opportunity Act (2014) states that "opportunities for work-based learning experiences" may include "internships, short-term employment, apprenticeships, and fellowships." It also allows funding for pre-employment transition services (pre-ETS) for students with disabilities to support work-based learning experiences (WBLEs). WBLEs provided through pre-ETS under WIOA "may include in-school or after-school opportunities, or experience outside the traditional school setting (including internships), that is provided in an integrated environment to the maximum extent possible" (2014).

Service Learning Opportunities

Service learning and volunteering facilitate the career development process by providing opportunities to build skills in self-exploration, career exploration, and career planning and management (Richards, Larson, Farr, Ferrell, Basha, & Cunningham, 2015). Immersion in service learning allows students to develop career-awareness and interests, engage in exploring career options, and choose a career in line with their goals (Bowen, 2007). Service learning provides students with community-based service opportunities and enhances their academic outcomes (Bowen, 2007; Hart & King, 2007; Pickeral, Lennon, & Piscatelli, 2008) and social emotional development (Pickeral et al., 2008). Integrating service learning as a critical element in an educational plan can also help students recognize the importance of connecting in-class and out-of-class experiences, which spurs them to become active learners (Bowen, 2007). When students can draw connections between classroom-based knowledge and service learning in the community, they tend to persist in pursuing academic achievement and overcoming academic

challenges (Gallini & Moely, 2003; Vogelgesang, Ikeda, Gilmartin, & Keup, 2002), contributing to higher retention rates (Braxton, Milem, & Sullivan, 2000).

Active engagement in service learning can improve employment outcomes and increase opportunities for higher starting salaries (Matthews, Dorfman, & Wu, 2015). A 2013 study, funded by the Corporation for National and Community Service, indicated that the odds of finding a job after being out-of-work are 27% higher for those who volunteer compared to non-volunteers. Volunteers who lacked a high school diploma were 51% more likely to find employment than non-volunteers and individuals living in rural areas were 55% more likely (Spera, Ghertner, Nerino, & DiTommaso, 2013).

Particularly for students with disabilities, volunteering experiences and service learning enhance students' career readiness skills and increase their knowledge of occupational options. Volunteer work can enhance networking, engagement in WBLEs, and knowledge about careers, leading to competitive employment opportunities (Spera, Ghertner, Nerino, & DiTommaso, 2013). Cease-Cook et al. (2015) suggested that students with disabilities should be given the opportunity to identify service learning activities in their transition assessment data (e.g., CTE guidance) or through their previous job-sampling experiences. Some schools offer all students credits for volunteering and others require service hours for high school graduation. Many high schools require engagement in service learning as a primary requirement for graduation for students with disabilities as it demonstrates their competence as outlined in the Common Career Technical Core (Cease-Cook et al., 2015).

Internships, Cooperative Education Programs, & Apprenticeships

Internship opportunities provide students' time to explore their career options and identify additional training that may be necessary to pursue their long-term career goals (Cease-Cook et al., 2015). The 2016 Internship and Co-Op Survey Report, by the National Association of Colleges and Employers (NACE, 2016), defines internships, paid or unpaid with the possibility of academic credit, as one-time work experiences for students supervised by professionals. The primary goal of internships is to involve students in an ongoing learning experience to develop work-centered knowledge, skills, and abilities in a high quality work environment (Alfred, Charner, Johnson, & Watts, 2013). Youth participation in internships during and after high school can help improve their employment outcomes (Fabian, 2007; Callahan & Benzing, 2004) as well as increase their success in securing career-oriented employment (Callahan & Benzing, 2004).

Cooperative education programs (co-ops) are more structured programs for students to immerse themselves in career-related work experiences with multiple periods of work as part of classroom study. They receive academic credit under mentorship of the teacher of the course (NACE, 2016). Haddara & Skanes's (2007) review of key findings in the literature indicates that students who participate in co-ops have higher grade point averages and salaries. In addition to

helping youth, co-ops benefit employers and postsecondary institutions (Haddara & Skanes, 2007).

Frequently, internships and apprenticeships provide valuable on-the-job learning experiences for individuals who did not complete high school and who may have limited access to other work-based opportunities (Harris & Ganzglass, 2008). Apprenticeship programs, which are a more intense form of work-based learning than internships and co-ops, can be structured a number of ways. The most prevalent form of apprenticeship is a registered apprenticeship, which is a designation indicating that a program has been registered by the Department of Labor's (DOL) Office of Apprenticeship or by a state agency recognized by the DOL to make such a designation. A more recent, and still evolving, approach to apprenticeship is the industry-recognized apprenticeship. Created in response to Executive Order 13801, these types of apprenticeships will be certified by third parties, as opposed to the DOL or authorized state agencies, and are considered a variation of traditional registered apprenticeships (Employment and Training Administration, 2018). Lastly, there are youth-focused apprenticeships that may begin as early as high school and pre-apprenticeship programs that can help youth and adults prepare for entry into a registered apprenticeship.

Limited data exists on the participation of youth and adults with disabilities in apprenticeships and pre-apprenticeships (Lynn & Mack, 2008). One study (Scholl and Mooney, 2004) of the Wisconsin Youth Apprenticeship Program found that 10% of youth apprentices had a documented disability and these youth had a lower completion rate than their participants without disabilities. The researchers concluded that the following factors promoted the success of students with disabilities: "high levels of program coordination/organization; meaningful communication between stakeholders; a good fit between a young's person abilities and their chosen occupation; an exceptional worksite placement; and relevant classroom instruction that integrated academic and technical competencies" (ODEP, 2015, p. 12).

The National Institute for Work and Learning revealed key evidence-based characteristics that led to developing high-quality internships, co-ops, and apprenticeships in 19 U.S. high schools (Alfred et al., 2013):

- Involve students on understanding the connections between WBLEs and coursework
- Require students to engage in self-reflection on their experiences
- Assign students to submit a final activity, project, or means of demonstrating learning on their experiences
- Allow students time in the school to participate in the WBLE programs
- Provide transportation for students to access work sites

- Hire staff coordinators to be the liaison between the school and employers to coordinate WBLEs programs

Summer Employment

Summer employment provides youth with several career development benefits, such as involvement in extracurricular activities, development of flexibility in managing work-related challenges (Carter, Trainor, Ditchman, Swedeen, & Owens, 2011b), and a better understanding of the connections between school and work (Brooke, Revell, & Wehman, 2009). Generally, high-income families are able to send their children to high-cost summer camps. In contrast, students from low-income backgrounds have fewer opportunities and resources and less access to needed structure and support during summer (Terzian, Moore, & Hamilton, 2009). In this regard, summer employment programs are an important strategy for reducing the gap between students from high- and low-income backgrounds (Terzian et al., 2009). Summer programs have been found to have positive effects on educational and career development outcomes among economically disadvantaged youth (McClanahan, Sipe, & Smith, 2004; Leos-Urbel, 2014; Terzian et al., 2009), youth identified with emotional and behavioral disorders (EBD) (Carter, Trainor, Ditchman, & Owens, 2011a), and youth with high-incidence disabilities (Carter et al., 2011b).

Youth with disabilities are likely to have limited access to summer employment experiences as well as limited work-related skills to find and maintain jobs (Carter, et al., 2011b). Programs can foster positive summer employment outcomes among youth with disabilities by: (1) involving parents in discussions about possible summer employments in advance (e.g., during the process of transition planning); and (2) encouraging youth with disabilities to connect to work-based experiences ahead of time, such as during spring semester (Carter et al., 2011b). These strategies can help youth with disabilities familiarize themselves with the summer youth employment programs process as well as identify their career interests and supports needed during the summer (Carter et al., 2011b).

Entrepreneurship

Self-employment and entrepreneurship opportunities can help youth fuel their talents and strengths to achieve successful work experience during and after high school. Entrepreneurship educational opportunities for youth work best when youth can access "…structured learning environments and support tools to help individuals develop entrepreneurial skills and become entrepreneurs" (WKF, 2006, p. 8). Although about 70% of youth show an interest in forming business startups, the vast majority of youth (85%) report little knowledge about how business development actually works (WKF, 2006). Green (2013) suggests that youth who desire to become self-employed may not be able to start their own business or reach their entrepreneurial goals due to current economic constraints and a lack of human, financial, and social capital as well as skills. Additionally, traditional K-12 curriculum may not adequately provide structured

instructions for students to develop knowledge and skills important for entrepreneurial development (WKF, 2006). The Learning for the 21st Century Report (2004) reported that students have an absence of sufficient knowledge as well as skills for entrepreneurial development and business processes in order to enter the workforce successfully after graduation.

Youth entrepreneurship programs provide youth opportunities to interact with adults in work settings, obtain on-the-job leaning experiences, develop long-term career and life goals, and acquire important skills such as self-efficacy, teamwork, and leadership skills (Bronte-Tinkew & Redd, 2001). Entrepreneurship programs can foster positive youth development by providing youth with a sense of purpose, introducing career development, and engagement in attaining business and career goals (Osgood, 2012). Bronte-Tinkew and Redd (2001) summarized empirical studies of youth participating in entrepreneurial activities who reported positive outcomes such as improvement in academic performance, practical skills, job readiness, short-term economic advantages, and social psychological development. In addition to the positive outcomes of the youth entrepreneurship programs, they add to the overall economic opportunities and the employment rate (Daniel & Kent, 2005; Green, 2013) in our society (Osgood, 2012).

Supported Employment and Customized Employment

If needed, youth with disabilities have the option to receive supported employment and customized employment services designed to provide youth with opportunities in competitive, integrated employment. WIOA (2014, p.) defines supported employment as "…competitive integrated employment, including customized employment, or employment in an integrated work setting in which individuals are working on a short-term basis toward competitive integrated employment, that is individualized and customized consistent with the strengths, abilities, interests, and informed choice of the individuals involved." WIOA (2014, p.) defines customized employment as "…competitive integrated employment, for an individual with a significant disability, that is based on an individualized demonstration of strengths, needs, and interests of the individual with a significant disability and the business needs of the employer, and is carried out through flexible strategies." These strategies under WIOA (2014) include job exploration and working with the employer to facilitate placement, including through:

- Customizing job descriptions based on employer needs or unmet needs
- Developing job duties, a work schedule, a job arrangement, specifics of supervision, and determination of job location
- Representation by a professional or self-representation in working with an employer to facilitate placement
- Providing supports and services at the job location

Many individuals with disabilities, including youth with disabilities, receive supported employment services through Vocational Rehabilitation (VR) agencies or Medicaid-funded Home and Community-Based Services (HSBS). As of 2014, 78% of HCBS service programs provided supported employment services (Friedman & Rizzolo, 2017). These initiatives facilitated access to supported employment for 94,012 people with disabilities (Friedman & Rizzolo, 2017). A recent study by Burke-Miller, Razzano, Grey, Blyler, & Cook (2012) examined supported employment outcomes among 1,272 adults with mental health disabilities in seven states. This study found that youth ages 18-24 and young adults ages 25-30 fared better in outcomes than adults ages 31 or older:

- Youth and young adults under 30 had significantly better supported employment outcomes than adults who were 30 or older.
- Young adults ages 25-30 had significantly better supported employment outcomes than youth ages 18-24.

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Youth Development and Leadership Opportunities

Youth development and leadership opportunities enable young people to develop skills and competencies needed to build their identities and navigate the world around them. Youth development consists of the processes that prepare young people to "meet the challenges of adolescence and adulthood through a coordinated, progressive series of activities and experiences which help them gain skills and competencies" (NCWD/Youth, 2005). Youth leadership is a component of youth development by which youth develop: (1) the ability to guide or direct others on a course of action, influence their opinion and behavior, and show the way by going in advance, and (2) the ability to analyze one's own strengths and weaknesses and set academic, vocational, and personal goals with the drive to accomplish them. For the purposes of this review, the literature on youth development and leadership opportunities is organized by the following themes:

- Conditions that promote positive youth development;
- Opportunities to develop agency;
- Opportunities to acquire initiative and leadership skills;
- Opportunities to build interpersonal skills and social capital; and
- Opportunities to develop critical thinking skills.

Conditions that Promote Positive Youth Development

Effective youth development and leadership programs provide a supportive atmosphere and engage youth in challenging and authentic activities (Roth & Brooks-Gunn, 2016). One way to facilitate youth growth and development is by incorporating the Positive Youth Development (PYD) principles into programs. The PYD principles recognize "…that all adolescents have strengths and that children and youth will develop in positive ways when these strengths are aligned with resources for healthy development in the various settings in which adolescents live and interact" (Zarrett & Lerner, 2008, p. 1). Browne's (2014, p.9), review of youth development research (Lerner & Lerner, 2011; National Research Council & Institute of Medicine, 2002; Roth & Brooks-Gunn, 2003a, 2003b; Whitlock, 2004) synthesized several positive youth development approaches and recognized that the programs often share the following essential practices:

- Identify and build on youths' strengths;
- Support all youth in their development, even though needs may differ;
- Provide access to caring people and physically and psychologically safe places that (a) are supportive and empowering; (b) provide explicit rules, responsibilities, and expectations for success; and (c) cultivate a sense of hope;

- Provide “SOS”—services that enhance adolescent development, opportunities to build skills and engage in meaningful and challenging roles and activities, and supports that promote a positive climate for health development and well-being;
- Encourage youth to make informed decisions, select their experiences, and engage as active agents in their own development;
- Build meaningful, respectful, sustained relationships between youth and adults; and
- Collaborate across community youth-serving and non-youth-serving sectors.

Cultural Competency

Another essential practice for youth-serving organizations is incorporating cultural competency (Augustine, 2004). Youth should have the opportunity to build relationships with institutions and organizations that are culturally competent. Cultural competence is associated with higher rates of youth agency, voice, engagement, and attendance in activities and experiences (Kennedy, Bronte-Tinkew, & Matthews, 2007). Kennedy et al. (2007) recommend that programs use a variety of strategies to ensure cultural competence in serving youth and families. Recommended strategies include involving leaders, volunteers, and practitioners from a variety of backgrounds; supporting exploration of cultural identity among children and adolescents; and seeking to understand them through their own self-definitions.

Facilitating Youth Growth & Development

Overall, in the last twenty years, the field of youth development and leadership has developed a keen insight into PYD, the contexts of development, and the components of a quality program that facilitate youth growth and development (Roth & Brooks-Gunn, 2016). However, Roth and Brooks-Gunn (2016, p. 15) acknowledge that more research needs to be done specifically on, “…the critical elements of youth development programs and the influence of other contexts on the association between program participation and outcomes for youth.” There are other factors that may affect the quality of youth development and leadership experiences including dosage and intensity (e.g. how many total hours and how frequently youth participate), adult to youth ratios, and staff credentials. Indicators of quality in these areas vary widely based on the intervention model and intended outcomes.

Overall, the body of research helps define how developmental assets and skills are developed in a program setting through individual, peer to peer, and youth/adult interactions. A few frameworks emerged in the last two decades that could better support schools and youth-serving organizations. One initiative incorporating PYD principles is the Youth Thrive framework. Based upon a thorough research review, the Youth Thrive framework indicates that several factors increase the likelihood of increasing positive outcomes and lowering the risk for negative outcomes for young people (Browne, 2014). The Youth Thrive framework focuses on supporting youth service professionals in advancing healthy adolescent development and well-

being in the following areas: (a) youth resilience, (b) social connections, (c) knowledge of adolescent development, (d) cognitive and social-emotional competence, and (e) concrete support in times of need (Browne, 2014).

Youth and young adults who cultivate developmental relationships with their friends, families, colleagues, mentors, supervisors, and leaders are more likely to experience success in their personal and professional lives (Search Institute, 2017). The Search Institute (2017, p.1) defines developmental relationships as, "…close connections through which young people discover who they are, cultivate abilities to shape their own lives, and learn how to engage with and contribute to the world around them". The Search Institute (2017) created the Developmental Relationships Framework that is centered on five elements (e.g., express care, challenge growth, provide support, share power, and expand possibilities) along with specific actions (e.g., be dependable, empower, advocate) to increase the likelihood of success for young people. An opportunity for young people to build developmental relationships can foster youth growth and development.

A meta-analysis of experimental studies that examined afterschool programs with the goal of fostering one or more personal or social skills suggests that afterschool programs do benefit youth and young adults (i.e., 5 to 18 years) (Durlak, Weissberg, & Pachan, 2010). The personal or social skills included problem-solving, conflict resolution, self-control, leadership, responsible decision-making, or skills related to the enhancement of self-efficacy or self-esteem (Durlak et al., 2010). Durlak et al.'s (2010) findings highlighted that not all afterschool programs are effective in serving youth and young adults. However, the afterschool programs that were characterized by the researchers as sequenced, active, focused, and explicit (SAFE) yielded significant effect on youth and young adult outcomes. Programs were designated as meeting the SAFE criteria if they demonstrated the following practices:

- Used a connected and coordinated set of activities to achieve their objectives relative to skill development (sequenced);
- Used active forms of learning to help youth learn new skills (active);
- Had at least one component devoted to developing personal or social skills (focused); and
- Targeted specific personal or social skills (explicit).

Durlak et al. (2010) emphasized the importance of dedicating time and attention to any task for learning to occur throughout the program. The instruction and expectations should be explicit to youth and young adults on what they are going to learn each day (Durklak et al., 2010).

Opportunities to Develop Agency

Adult allies who serve youth need to provide opportunities for youth to develop agency, enabling them to self-direct their own lives. Agency is the "…ability to make choices about and take an active role in one's life path, rather than solely being the product of one's circumstances" (Nagaoka, Farrington, Ehrlich, & Heath, 2015, p. 2). Bandura (2006) states that there are four key components of agency: (1) intentionality, (2) forethought, (3) self-reactiveness, and (4) self-reflectiveness. Bandura (1997, p.3) believes the heart of agency is personal efficacy, or self-efficacy, which he refers to as "…beliefs in one's capabilities to organize and execute the course of action required to produce given attainments." Agency, rooted in psychology, is similar to the construct of self-determination, rooted in special education. Agency and self-determination are connected by a shared belief in the autonomy of individuals. According to Field, Martin, Miller, Ward, and Wehmeyer (1998, p.2), "self-determination is a combination of skills, knowledge, and beliefs that enable a person to engage in goal directed, self-regulated, autonomous behaviors." Test, Fowler, Wood, Brewer, and Eddy's (2005) analysis of definitions of self-advocacy identified four components within the self-advocacy framework including knowledge of self, knowledge of rights, communication, and leadership.

Self-Efficacy, Self-Determination and Self-Advocacy Skills

Youth have to navigate complex environments within the education system and other public service systems which requires self-efficacy, self-determination, and self-advocacy skills to ensure that they meet their academic and personal goals. The opportunities for youth to build these skills will also enable them to develop the attributes that employers value in their employees (NACE, 2015). Employers strongly desire individuals with leadership skills, ability to work in teams, written communication skills, problem-solving skills, and a strong work ethic (NACE, 2015). Studies have indicated that self-efficacy beliefs as well as access to caring and engaging adults promotes higher levels of motivation, emotional well-being, and performance accomplishments (Bandura, 2006; Bandura, 1994; Chen & Solberg, 2017; DeWitz, Woolsey, & Walsh, 2009). Self-determination interventions have been found to have:

> …established a causal effect (with multiple interventions) on (a) student involvement in educational planning (Martin et al., 2006, Wehmeyer, Palmer, Lee, Williams-Diehm, & Shogren, 2011) (b) enhanced self-determination (Palmer, Wehmeyer, Shogren, Williams-Diehm & Soukup, 2012; Wehmeyer, Palmer, Shogren, Williams-Diehm & Soukup, 2012; Wehmeyer, Shogren, et al., 2012), (c) access to the general education curriculum and educational goal attainment (Shogren et al., 2012), and (d) more positive employment and community inclusion outcomes (Powers et al., 2012; Shogren et al., 2015). (Wehmeyer, 2015, p. 21)

Self-advocacy in Secondary Education

In the context of special education, Roberts, Ju, and Zhang (2016) reviewed self-advocacy studies that have found a correlation with gaining IEP knowledge and leadership skills;

work-related knowledge; sense of empowerment; positive post-training outcomes (i.e., employment and post-secondary education); self-advocacy skills (e.g., learning about their own and other's disability, strengths and weaknesses); greater understanding about college life; opportunities to meet others with disabilities and role models; greater self-awareness and self-esteem; and disclosure skills (e.g., identify needs and request assistance) (Roberts et al., 2016, p. 216). Roberts et al. (2016) acknowledges that available studies do not meet the high quality standards and lack a diverse representation of youth (e.g., age, disability, gender). However, the Robert et al. (2016) study highlights many of the effective secondary transition evidence-based practices and predictors as summarized by Mazzotti, Test, and Mustian (2012). These kind of activities benefit all youth with disabilities; for example, Mazzotti, Kelley, and Coco (2013) identify that teaching students with intellectual disabilities to use Self-Directed Summary of Performance will likely increase their participation in their Person-Centered Planning meetings as well as transfer their acquired skills to the employment setting.

Khalifa's (2013) study examined the role of school leadership in the self-advocacy of at-risk students at an urban alternative high school. Khalifa (2013) shared that the student attendance and retention rates were consistently above 95%, the graduation rate was above 90%, and over two thirds of students had postsecondary plans (e.g., education or employment). Khalifa's (2013) observations and findings led him to recognize four distinct leadership behaviors that foster self-advocacy in youth and parents: (a) inclusive administrative structures; (b) strong student-principal relationship; (c) school-community overlap; (d) and acceptance of indigenous student identities.

Self-advocacy in Postsecondary Education

Similar to their prior educational environment, postsecondary students have to navigate their academic environment, extracurricular activities, and community activities. In addition, young adults may have to figure out their living arrangements and coordinate their transportation as well as manage their finances and healthcare. Some young adults may choose to work while obtaining a postsecondary credential. Often, young adults will find themselves alone in the process of navigating all these different networks to obtain needed services. For young adults with disabilities, they must disclose and provide documentation of their disability in order to receive services at the postsecondary level (Shaw, Madaus, & Dukes, 2010). Unfortunately, young adults who received special education services often choose not to disclose their disability or believe that they have a disability in their new postsecondary education setting (Newman & Madaus, 2015). Research indicates that self-efficacy, self-determination, and self-advocacy skills leads to academic success for young adults with disabilities in college (Jensen, Petri, Day, Truman, & Duffy, 2011; Lombardi, Murray, & Kowitt, 2016). In general, young adults who have high self-efficacy beliefs will likely have a sense of purpose in life that will naturally lead to academic success in college (DeWitz et al., 2009).

Self-advocacy in Employment

For young people with disabilities who need to receive accommodations in the workplace, disclosure is the key to accessing and receiving needed supports. There is limited research on the impact of disclosing and how it affects workplace culture as well as opportunities for promotion. However, research does indicate that individuals with disabilities have real concerns as to how disclosure can impact their hiring, relationships with colleagues, and career advancement (von Schrader, Malzer, Bruyere, 2013).

Opportunities to Acquire Initiative and Leadership Skills

One of the top skills employers seek from young adults is leadership, including the ability to take initiative in the workplace (NACE, 2015). It is estimated that companies spend $14 billion a year on leadership programs (Leonard & Loew, 2012). Therefore, secondary and postsecondary education institutions and programs are heavily invested in developing and reinforcing youth and young adult leadership skills. Youth and young adults acquire leadership skills in a variety of contexts and experiences, depending on their personal interests and preferences.

Young adults interface with leadership in different contexts, from formal to informal experiences, which lead to making observations about what the key leadership skills as well as key factors are that lead to leadership development. Young adults with disabilities shared key indicators of leadership from their own personal experiences focusing on key attitudes and skills as well as influences on others (Carter et al., 2011). The key attitudes and skills identified by young adults included perseverance, independence, positive attitude, confidence, desire to lead, goal setting, effective communication, and social skills (Carter et al., 2011). The young adults indicated the key behaviors to influence others: advocacy/self-advocacy; helping others; mentoring youth; and leading by example (Carter et al., 2011). Young adults highlighted that there are two key components to developing leadership skills—experiences and relationships (Carter et al., 2011). The young adults shared that these types of experiences fostered their own leadership development: extracurricular activities, academic rigor, disability-specific opportunities, and informal community activities (Carter et al., 2011). Different types of relationships were instrumental in developing their leadership skills with the support of their parents and other family members, teachers and school staff, mentors, and friends (Carter et al., 2011).

Leadership experiences before college have an impact on postsecondary leadership experiences (Dugan & Komives, 2007). High school leadership experiences can include formal leadership training experiences, student groups (e.g., Student Council), volunteer services, varsity sports, and positional leadership roles (Dugan & Komives, 2007). Traditionally, youth leadership development has received less attention than adult leadership development (Rehm, 2014). There are a few adolescent models that have been cited in the adolescent leadership

literature: life span approach to leadership development; framework for 21st century learning; and developing a leadership identity (Rehm, 2014). However, Rehm (2014) proposes a model for adolescent leadership development incorporating evidence-based practices using personal application experiences. He argues that the other models are built upon factors that are beyond the instructor's ability to deliver in context of their environment. Rehm (2014) focuses on three components that are within the instructor's ability to change in youth: Best Practices of Leadership; Identity/Personality; and Self-Efficacy. For the best practices of leadership, he encourages using evidence-based Kouzes and Posner's Student Leadership Practices Inventory (2006). To better understand youth identity and personality, Rehm (2014) recommends using the Myers Briggs Type Indicator (Briggs et al., 1998). Lastly, for the self-efficacy component, Rehm (2014) advises incorporating success stories of youth and young adult in high school and college. In addition to these three components, Rehm (2014) advocates for having mentors and developing an evaluation to be included in the model.

Dugan & Komives (2007) state that leadership development matters at the college level. At the college level, participation is key to developing and honing the leadership skills that began at the secondary level. College students need to have opportunities to be mentored, discuss socio-cultural issues, get involved in campus clubs and organizations, community service involvement, and participate in formal leadership programs (Dugan & Komives, 2007). In addition, holding leadership positions develops strong leadership skills (Dugan & Komives, 2007). Flanagan & Levine (2010) point out that college is often the place to provide opportunities for civic engagement that build leadership skills, but young adults who select another pathway after high school such as a credentialed program or employment do not receive the same level of opportunity in civic engagement. Young adults have to consider alternative programs to ensure that they receive the opportunities in civic engagement to build upon those leadership skills, such as City Year or AmeriCorps (Flanagan & Levine, 2010). Dugan & Komives (2007) make several key recommendations for colleges to enrich their campus leadership programs. However, several of the recommendations can be extrapolated into other contexts or programs where young adults are building leadership skills: discuss social and cultural issues of the day; encourage young adults to get involved in at least one organization; advise young adults into at least one formal leadership program; encourage and develop mentoring opportunities; design programs that focuses on the needs of marginalized groups; encourage self-awareness of leadership efficacy; and reach out to K-12 educators in the community to build upon what works in the local school environment (Dugan & Komives, 2007).

Opportunities to Build Interpersonal Skills and Social Capital

The key to lifelong personal and professional relationships lies in having effective communication skills. Employers highly desire individuals who have strong interpersonal skills

to create a strong team atmosphere within the workplace as well as help promote their brand and ensure their bottom line (NACE, 2015). These interpersonal or communication skills are often not explicitly taught in the classroom but learned at home, church, after-school extracurricular activities, and/or through mentoring programs. Effective interpersonal or communication skills leads youth to "thriving" and building social capital that, in turn, leads them to becoming agents of social change.

In the area of positive youth development, interpersonal skills are a key component of adolescents "thriving" in developing supportive relationships. Thriving is built upon empowerment, relationships, and sparks (Scales, Benson, & Roehlkepartain, 2011). Scales et al. (2011, p. 264) define "sparks" as "…a passion for a self-identified interest, skill, or capacity that metaphorically lights a fire in an adolescent's life, providing energy, joy, purpose, and direction". Youth's development of "sparks" can be fostered through supportive relationships (e.g., adult allies) and opportunities to empower youth voice. As a result, youth can "thrive" as they transition from high school to adult life. Youth who utilize their "sparks", relationships with adult allies, and their voice are more likely to have stronger academic, psychological, social and behavioral well-being outcomes that benefit their community and society (Scales et al., 2011). For adult allies, creating opportunities to nurture "sparks", foster relationships, and encourage empowerment for youth appears to have more impact on their outcomes than their gender, race/gender, or socioeconomic status (Scales et al., 2011).

For youth from lower socioeconomic backgrounds, research indicates that access to social mobility and extracurricular participation is a significant barrier (Snellman, Silva, Frederick, & Putnam, 2015). Social capital leads to social mobility. Social capital provides youth and young adults with access to information and relationships that can make the difference between postsecondary success and failure. For young adults who are the first in their families to enroll in college, choose a career, and/or engage in political activism, providing support for their intellectual, social, emotional, moral, spiritual, and physical development is critical to their success. Therefore, adult allies should make concerted efforts to engage with youth to develop their interpersonal or communication skills as well as promote programs (e.g., mentoring) within their communities that focus on building these skills.

Mentoring

An effective way for youth to learn about building and utilizing their interpersonal skills as well as building social capital is through informal and formal mentoring programs. Mentoring programs are usually focused in one or more areas: youth mentoring, academic mentoring, community-based and workplace mentoring (Eby, Allen, Evans, Ng, and DuBois, 2008; Lindsay, Hartman, & Fellin, 2015). Youth mentoring involves a relationship between a caring, supportive adult and child/adolescent (Eby et al., 2008). Academic mentoring occurs when a faculty member imparts knowledge, provides support, and offers guidance to a student on academic (e.g., classroom performance) as well as non-academic (e.g., networking) issues (Eby et al.,

2008). Workplace mentoring is implemented in the mentee's workplace with the purpose of personal and professional growth and development (Eby et al., 2008).

Research has shown that quality mentoring initiatives benefits mentors and mentees (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011; Eby et al., 2008; Lindsay et al., 2015; Sower et al., 2016; Weiler et al., 2013). College students who served as mentors indicated developing higher levels of civic attitudes, community service self-efficacy, self-esteem, interpersonal and problem-solving skills, political awareness, and civic action (Weiler et al., 2013). Lindsay et al. (2015), in their review of mentorship programs of youth and young adults with disabilities, share in their analysis that mentoring can lead to positive outcomes (e.g., self-determination, quality of life, knowledge of school and work supports, social skills, employment outcomes) impacting school and employment. Sowers et al. (2016) examined a STEM mentoring invention and its impact on students with and without disabilities on career planning outcomes. They found that disability status of the mentor had no significant effect on students with disabilities. In other words, youth and young adults can successfully be included in the STEM mentoring program. Eby et al. (2008), in their review, shared that attitudes, interpersonal relations, and motivation/involvement appeared to be influenced by youth, academic, and workplace mentoring. According to Eby et al. (2008), academic mentoring seemed to have the strongest association with reported outcomes followed by workplace and youth mentoring. In addition, researchers have suggested that youth mentoring could be more effective when paired with specialized services to address youth and young adult issues (e.g., academic problems, parental conflict) that are challenging to address through mentoring itself (DuBois, Portillo, Rhodes, Silverthorn, and Valentine, 2002; Eby et al., 2008). As it pertains to the impact of adult role models in general, Kipp, Ruffenach, and Janssen (2016) found that supportive positive relationships between youth and adults in out-of-school settings through formal or informal pairing can help youth overcome adversities, promote positive racial identity, as well as improve academic performance, emotional well-being, and relationships with other youth and members of the community.

Service Learning and Volunteering

Service learning is an opportunity for youth and youth adults to investigate, analyze, and address community challenges through academics and action (Learn and Serve America, 2011). Similar to mentoring, service learning programs are implemented in several contexts: secondary schools, postsecondary education entities, and/or community programs (Celio, Durlak, and Dymnicki, 2011). Service learning programs indicate that youth and young adult have been shown to increase their personal and professional leadership development: attitudes towards self, attitudes toward school and learning, civic engagement, social skills, and academic performance (Celio et al., 2011). Volunteering and community service has long been viewed as a pathway to employment in this country (Spera, Ghertner, Nerino, and DiTommaso, 2013). Spera et al. (2013) recognize that volunteering increases an individual's ability to gain social capital and human capital that leads to employment. Social capital focuses on the person-to-person

connection such as professional contacts, durable networks, employment leads, and social relationships (Spera et al., 2013). Human capital focuses on the access to opportunities such as acquiring knowledge, developing skill/abilities, seeking leadership opportunities, and gaining work experience (Spera et al., 2013). Volunteering and community service initiatives lead to increased opportunities in obtaining employment, including for youth and young adults without a high school degree and/or those who live in a rural areas (Spera et al., 2013).

Peer Interventions and Organized Extracurricular Activities

Peer interventions can assist all youth in navigating the perils of social hierarchy and cliques in middle and high school. Youth with disabilities, such as youth with Autism Spectrum Disorder (ASD), can face particular challenges in developing social competence and peer connections throughout middle and high school (Carter et al., 2014). Social competence and peer connections are key components in building social capital. Carter et al. (2013) provides an overview of intervention models specific to youth with ASD, including peer-focused interventions. The peer-focused interventions tend to focus on providing ongoing social/academic support to youth with ASD by having youth without disabilities receive peer training, disability-specific information, and scheduled social interaction times with the support of the faculty (Carter et al., 2014). In contrast, youth with ASD, in reporting their views on peer inventions, prefer group activities focusing on social skills as well as "natural" encounters and experiences with their peers without disabilities instead of more formal interactions and direct instruction (Bottema-Buetel, Mullins, Harvey, Gustafson, & Carter, 2015).

Snellman et al. (2015) reviewed four national longitudinal surveys, from the 1970s to early 2000s, on American high school youth that revealed a lack of access to organized extracurricular activities based upon class. Class-based inequality has increased in the last three decades driven by lower levels of public funding to support organized extracurricular activities (Snellman et al., 2015). As public funding shifted to other initiatives, families step in to pay the fees for their children to play in organized extracurricular activities (e.g., sports and clubs). Therefore, children and youth from low-income families, which can include youth with disabilities, often miss out on participating in sports and other extracurricular activities that can provide them with social connections and opportunities to learn youth development and leadership skills (e.g., teamwork, communication, and perseverance) (Snellman et al., 2015). McGuire and McDonnell (2008) discovered a predictive relationship between time spent in recreation and self-determination. In other words, as youth and young adults with intellectual disabilities spend more time in recreational activities it will likely lead them to exhibiting higher levels of self-determination skills and behaviors. Often, organized extracurricular experiences promote social and economic mobility, in addition to civic engagement and connectedness, for all youth, including youth with disabilities. The class-based inequality of organized extracurricular activities may be jeopardizing the ability of children and youth from marginalized groups from "climbing the economic ladder".

Opportunities to Develop Critical Thinking Skills

Robert Ennis (1985, p. 45) defined critical thinking as "…reflective and reasonable thinking that is focused on deciding what to believe or do." Possessing critical thinking skills means more than simply being a problem-solver. It means being able to think strategically, being able to move from thinking in the weeds to thinking about big picture as well as all the moving parts and pieces, and being able to make connections as well as recognizing commonalties and differences across multiple contexts and situations within their field (e.g., special education & neuroscience). According to Silva (2008), reports in the 1990s (e.g., DOL's Secretary's Commission on Achieving Necessary Skills [SCANS]) focused attention on the need for educators to teach not only basic skills but simultaneously teach higher order thinking skills to students as they acquire and analyze information. Employers are evaluating potential employees on their ability to "…identify what kind of information matters, why it matters, and how it connects and applies to other information" (Silva, 2008, p. 2). Several companies require candidates to complete simulated workplace situations that utilize their critical thinking skills during the interview process. Employers want to see what candidates do with the knowledge as opposed to regurgitate it (Silva, 2008).

Critical Thinking & Explicit Instruction

The National Governors Association (2005) conducted an online survey from over 10,000 high school students that resulted in 40% of students recognizing how the high school curriculum failed to meet the necessary college and career readiness skills, including critical thinking preparation, in which one-third of students ranked as fair-to-poor. Most research on critical thinking has been focused in the area of postsecondary education instead of secondary education. However, Marin & Halpern (2010) investigated two types of critical thinking preparation by observing embedded and explicit instruction in low-performing high schools with large minority enrollment. In their review of the literature, Marin & Halpern (2010) observed that the traditional instructional methods of embedding critical thinking were often incorporated in the advanced courses which left minority and disadvantaged students from learning critical thinking skills (Solorzano & Ornelas, 2004; Warburton & Torff, 2005: Zohar & Dori, 2003). In the course of their investigation, Marin's & Halpern's (2010) studies resulted in evidence that an explicit instruction in critical thinking, designed to foster transfer of skills across multiple contexts and situations, benefited all students. In addition, they discovered that high GPAs were the smallest contributor to success in critical thinking. Therefore, all students regardless of academic qualifications and backgrounds could benefit from explicit instruction in critical thinking.

Critical Thinking & Disability

In the last decade, there has been a consensus on the importance of college and career readiness (CCR) for youth and young adults among education, government, and the business communities. Lombardi, Kowitt and Staples (2014) examined critical thinking skills associated with CCR of high school students with and without disabilities, along with several other demographic factors, including race, socioeconomic and ELL status. Lombardi et al. (2014) organized the critical thinking skills using Conley's (2007) five-part model: problem formation, research, interpretation, communication, and precision and accuracy. Lombardi et al. (2014) used a self-report measure called CampusReady that allowed students to self-measure their critical thinking skills aligned to the five-part model. Students without disabilities self-rated themselves higher on each of the components of the critical thinking model compared to students with disabilities. Students who rated themselves higher on measures of critical thinking had higher GPAs and standardized test scores. Students with disabilities only displayed a significant relationship between GPA and critical thinking. The difference in scores between students with disabilities and without disabilities was the largest between 9th and 12th grade. The results indicated that students with disabilities need more guidance around interpretation, communication, and precision/accuracy competencies within the critical thinking model. Lombardi et al. (2014) suggest teaching critical thinking skills, incorporating explicit instruction of each component of the five-part model, and incorporating the assessment data (e.g., CampusReady) to form IEP goals that focus on critical thinking skills.

Critical Thinking & Youth Agency

Postsecondary education institutions and employers review applications seeking concrete examples of youth having demonstrated ability to create and meet personal as well as professional goals, otherwise known as youth agency. Youth agency is a component of youth leadership development that builds those critical thinking skills or in this context, strategic thinking skills. Strategic thinking skills is defined, by Larson & Angus (2011, p. 277), as "…use of dynamic systems reasoning to anticipate real-world scenarios and plan work". Larson & Angus (2011) conducted interviews with diverse youth in 11 high-quality youth art and leadership programs in urban as well as rural areas on their acquired "agency skills". In general, youth exhibited a greater understanding of the time and energy required to succeed in their projects, including recognizing the association between their effort and the outcome (Larson & Angus, 2011). One quarter of youth gained concrete organizing skills to complete project such as setting goals, ordering tasks, and making decisions (Larson & Angus, 2011). Lastly, more than one third of youth demonstrated building strategic skills and systems, including actively anticipating the rollout and wrap up of project, being cognizant of how people might think and act, as well as being flexible and adjusting plans as necessary (Larson & Angus, 2011). The development of youth agency skills along with strategic thinking skills was facilitated and supported by adult allies who provided "nondirective" assistance (Larson & Angus, 2011). The nondirective assistance by adult allies included providing youth control of their project,

providing youth with initial training, contributing input to projects, and providing back-up assistance as needed (Larson & Angus, 2011).

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Connecting Activities

All across the age spectrum, there are basic needs and services that ensure that youth are able to reach their education, employment, and independent living goals. Some of these needs are universal, such as food, healthcare, housing, and transportation, while others are specific to a sub-group of youth, such as English as a Second Language classes, child care, or disability benefits counseling. The literature identifies services and supports as integrated supports (Moore & Enig, 2014) or student support services (Rowe et al., 2015). The National Collaborative on Workforce and Disability for Youth (NCWD/Youth) uses the term ***Connecting Activities*** when referring to services and supports that youth may need to connect to in order to address their individual needs and goals. While the connecting activities may be individualized, all youth need access to services and support to address their needs during transition to adulthood.

For the purposes of this review, the literature on connecting activities is organized by the following themes:

- Health and mental health services and opportunities to engage in health promoting activities;
- Services that address basic needs and barriers to employment;
- Training and support for independent living;
- Continuing education opportunities, services, and support;
- Services and support tailored to their individual circumstances; and
- Cross-cutting practices that facilitate connecting activities.

Health and Mental Health Services and Opportunities to Engage in Health Promoting Activities

Health Services

As youth are transitioning to adulthood and gaining more independence in their own decision making, it is important that they have access to appropriate health care to meet their needs and support them as they work towards their goals. It can be difficult for youth with a chronic health condition to successfully complete their school responsibilities, to navigate workforce responsibilities, and to gain the education and training that they need to meet their education and career goals. Youth need access to health care, including access to health insurance and health education, in order to be supported in their transition to becoming adults. As they gain increasing responsibility for their health care decisions, youth need access to information and a supportive environment to ask questions and voice concerns.

As youth transition into young adulthood, they are also transitioning from the pediatric system of health care to the adult system of care (Bonnie, Stroud, & Breiner, 2015). There is

little coordination between pediatric and adult systems which can leave young people on their own to figure out how to access health care once they have aged out of the pediatric system. While this transition can be tough for all youth, youth with disabilities and chronic conditions need consistent care and management that may involve multiple providers and specialists (Bloom et al., 2012). Disruptions in care due to the transition to the adult system can negatively impact health and have serious consequences for young people with specific or complex needs (Bloom et al., 2012). Health care transition has been described by some youth and parents as "falling off a cliff" (Stewart et al., 2014) as they are cut off from the pediatric system and left on their own to navigate a new one.

As youth are transitioning to adulthood, they are gaining increasing independence and increasing responsibility (Bonnie, Stroud, & Breiner, 2015). In the adult health care system and as adult patients, older youth are suddenly responsible for finding their own physicians, making appointments, informing their new physician of their health history and their family's history, and making their own medical decisions (Bonnie et al., 2015). This new role can be daunting, but with support and preparation, youth can successfully transition with little disruptions in care. In order to ease the stress of the transition, it is important that conversations about transitioning to the adult system be discussed positively and that youth are given an idea of what to expect (Lugasi, Achille, Stevenson, 2011). It is also important that youth have the opportunity to learn about the adult system and all its differences as well as to begin planning out their transition so it can go smoothly (Lugasi et al., 2011). Even with preparation, as youth begin to transition, it will be important that they continue to get support in case they have questions or are having trouble finding a doctor to meet their specific care needs (Lugasi et al., 2011).

Unfortunately, statistics show that there are large numbers of young people who lack health insurance or whose health insurance is inadequate for their needs (Lawrence, Gootman, & Sim, 2009; Oberg, Hogan, Bertrand, & Juve, 2002). Without access to regular insurance, youth are less likely to access regular primary and preventative care (Lawrence et al., 2009). Since coverage expansions under the Affordable Care Act (ACA) were rolled out in 2014, uninsured rates for children under age 19 have fallen from 7.5% in 2013 to 5.4% in 2017 (U.S. Department of Commerce, 2018; U.S. Department of Commerce, 2014). As a result, nearly two million additional children have coverage. While these improvements are encouraging, coverage gaps still persist between racial and income groups.In one study, 69% of college students who dropped out of college before completing said that providing health insurance would have helped them to stay in school (Johnson, Rochkind, Ott, & DuPont, 2009). Many youth who are eligible for public health insurance do not receive it because either the youth or their parents do not realize they are eligible or because they are unaware of how to apply (Lawrence et al., 2009). The passage of the Affordable Care Act (ACA) has reduced the numbers of uninsured and has extended the time that youth are able to stay on their parents' insurance plan to 26 years old (Marken, 2016). While this is helpful for many youth, it assumes that parents have health

insurance and are able to extend the coverage to their child who is now a young adult (Wakschlag, Bresslin, & Yee, n.d.).

Even with health insurance, there are a number of additional considerations that may hinder access to care, such as additional costs and coverage (Lawrence et al., 2009; Oberg et al., 2002). For some youth, limited transportation options to get to a health care provider may lead them to not seek help or advice from a medical professional (Oberg et al., 2002). High deductibles and cost sharing agreements of private health insurance plans can be a financial barrier for youth seeking services, especially those seeking services on their own (Lawrence et al., 2009). Coverage limitations of a youth's insurance plan can make it nearly impossible for some youth to access needed services (Lawrence et al, 2009). Youth managing multiple health conditions, who may need case management support, may not have health insurance to cover that type of support (Lawrence et al., 2009). Some common health care needs of youth are less likely to be covered (partially or in full) by insurance, such as "…obesity, intentional and unintentional injury, mental health, dental health, and substance abuse" (Lawrence et al., 2009, p. 8). If youth are to receive health care that is appropriate to their needs, it is important that they also have health insurance that covers their health care costs and support for the additional costs that are associated with accessing care.

Lastly, in addition to understanding their health care transition, youth need to have discussions on confidentiality (Oberg et al., 2002; Alford 2009) and what it means to share a primary care physician (PCP) with their parents (Klein, McNulty, & Flatau, 1998). Youth may not understand the level of confidentiality that is available to them from health care providers and may avoid getting help for certain needs out of concern that their parents or friends might find out (Oberg et al., 2002; Alford, 2009). For several youth, the development towards adulthood involves engaging in risky behaviors (e.g., reproductive health) that can have negative health consequences either through accidental injury or disease transmission or through the development of long-term habits (Jozkowski & Crawford, 2016; Lawrence et al., 2009). A study found that about half of youth who shared a PCP with their parents said that they would still go to their PCP for concerns about a sexually transmitted infection (STI), but for other concerns the numbers were lower (Klein et al., 1998). Thirty percent of youth would go to their PCP for birth control or suspected pregnancy, but only 6% would go for concerns related to alcohol or drug use (Klein et al., 1998). Youth shared that for problems related to drug use, they would go to a doctor that they did not already know (Klein et al., 1998). Youth who are still in school will often go to school-based clinics for help with personal problems and to get information related to STIs or substance use (Oberg et al., 2002). It is important for physicians to understand and be sensitive to the unique characteristics of youth, including how to work with youth who may be intimidated to share concerns that are a result of risky behavior.

Mental Health Services

The ability to access mental health services is often overlooked as a need for youth, but many mental health conditions have been found to start at an early age and then develop over time (National Institute of Mental Health, 2016). A diagnosable mental health disorder can be found in nearly one in five adolescents (U.S. Department of Health and Human Services Office of Adolescent Health, 2017). Autism and ADHD are often associated with childhood onset; however, other conditions present themselves before a young adult turns 24, such as social phobia, depression, obsessive compulsive disorder, schizophrenia, and bipolar disorder (National Institute of Mental Health, 2016). Youth who are struggling with a mental health condition and who are finding it difficult to access care to appropriately manage their mental health condition may find that the difficulty from their condition permeates every part of their lives. Youth may find that daily tasks, such as work, school, or hanging out with other people, may become more difficult (Teen Mental Health, 2017).

In order pursue their academic, career, and life goals, all youth need to have the ability to access mental health care services. Over half of the youth who need support for mental health conditions do not receive it (Murphey, Vaughn, & Barry, 2013; U.S. Department of Health and Human Services Office of Adolescent Health, 2017). Part of this lack of support may be due to the continued stigma surrounding mental health conditions which may lead young people to not seek out support when they need it (Murphey et al., 2013). Youth may be concerned with how their peers, their teachers, and the other adults in their life may react to finding out that they are in need of support for their mental health. This stigma that youth perceive may actually be higher than any real negative attitudes that people have (Eisenberg, Downs, Golberstein, & Zivin, 2009). Having more conversations with youth about mental health can positively impact their likelihood of seeking out help when they need it.

Additionally, poor coordination between the systems of care that work with youth and a lack of insurance or insurance coverage for mental health may result in unnecessary barriers to treatment (Murphey et al., 2013). A youth's access to mental health care may involve a variety of individuals, both through the identification of a need and through support and treatment. Youth may access mental health services through the school system, through a community organization, or through a referral from their primary care physician to a private or public specialist. Unfortunately, instead of providing youth with an increased level of access, the lack of coordination among these individuals reduces the likelihood that youth will access care. Care may only be sought in a moment of crisis instead of when the first signs of mental health needs emerge. Adults who work with youth need to be aware of the early signs of a mental health condition and what they can do to support their youth to seek out and get the care that they need. These adults need to understand what services are available for youth without insurance or with insurance that does not cover mental health treatment. Schools and school health centers often play a large role in the identification of mental health needs among youth, but these centers are often not able to provide the intensive and long-term care that some youth may need (Murphey, Vaughn, & Barry, 2013).

As for youth with physical disabilities and chronic health conditions, youth with a mental health diagnoses will need support transitioning to the adult system of mental health care. There is no coordinated system to ensure that youth with mental health needs are able to make a smooth transition into adult care (Podmostko, 2007; Woolsey & Katz-Leavy, 2008). Youth may not know how to continue receiving services once they have aged out of their pediatric system of care and therefore may have inconsistent care and disruptions in care. Proper management of mental conditions is often essential for individuals to work and be involved in social situations. Disruptions in care can have significant consequences for youth who are beginning their life as independent, emerging adults. Information and support needs to be available for youth while they are still in the pediatric system of care in order to help them plan and prepare for the transition to adult system and limit any disruptions in care.

Older youth, those who are no longer in high school and those who may have entered post-secondary education, are gaining a level of independence that may further complicate mental health care access. While in secondary school, youth are at least attending school every day where teachers may become aware of emerging mental health needs and refer them to school support services, however varied and limited these may be. While some community colleges are increasing the availability of counseling, the availability of psychiatric care either on campus or through the campus structure is not common (Edwards, 2015). These older youth may not know how to access help for a mental health need, and they may also lack the social support system necessary to guide them through an uncertain and possibly scary time with increased independence and the changes that come with young adulthood (Katz & Davison, 2014). A greater availability of information about mental health, both on college and university campuses and in organizations that work with out of school youth, can help facilitate comfort in addressing mental health needs, support for accessing service needs, and an understanding of how to access care (Armstrong & Youth, 2015).

Health Promoting Activities including Recreation

Participation in recreational and leisure activities contributes positively to health and well-being (King et al., 2003). Youth participation in recreational activities promotes physical, emotional, and social health as well as happiness (Caldwell & Witt, 2011; Geisthardt, Brotherson, & Cook, 2002; Murphy & Carbone, 2008). Research indicates that participation in recreational and physical activities outside of school has multiple benefits for all children, including those with disabilities, such as increased cultural awareness and psychological well-being, optimized physical health, and opportunities to build connections with other people in the community (Murphy & Carbone, 2008; Taheri, 2015; Rimmer & Rowland, 2007). The inclusion of youth with disabilities in recreational activities, including extracurricular school-related activities, starting at an early age is important to ensure they can reap similar benefits as other children throughout their development (Rimmer & Rowland, 2007).

Youth develop their own self-concept, attitudes, and behaviors throughout their childhood and adolescence, adjusting them as they mature into adulthood (Rimmer & Rowland, 2007). Recreation provides youth with the opportunity to make their own choices about what they will do and how they will find meaning in that chosen activity (Caldwell & Witt, 2011). These choices help youth to develop their "emotional and behavioral autonomy" (Caldwell & Witt, 2011, p. 18), motivation, and self-determination skills which are important for their transition to adulthood. Recreation can help all youth to develop a sense of competence and achievement, which may be especially important for youth who have difficulty with academics. Recreational activities and club involvement has also been found to help youth develop resiliency and problem solving skills (Fredricks & Eccles, 2008). In organized recreational activities, students have the opportunity to try difficult tasks on their own in a supportive environment. Through activities such as working with a diverse group of individuals toward a common goal, recreation can have a positive impact on feelings of self-esteem and the development of social skills. For youth who are beginning to look for opportunities to develop relationships with a broader range of adults and peers, recreation provides an opportunity to expand their social interactions, try out different roles that they may not have participated in before, and develop new skills. In addition to the psychological and social benefits, research has found participation in recreation to be correlated with higher rates of academic achievement, positive attitudes towards school, and achievement test results (Weinstein, Fuller, Mulrooney, Koch, 2014). Participation in recreational activities is also correlated with reduced rates or delinquency, aggression, substance use and dropping out (Weinstein et al., 2014). Although there may be some variations in the impacts of participation in recreation depending on the type of and structure as well as setting of the activity, the evidence overwhelming supports the overall positive impact.

Studies indicate that children and youth with disabilities have lower participation rates in physical activity at school and outside school and tend to be more sedentary on the weekends (Schreiber, Marchetti, & Crytzer, 2004). While benefits of participation are many, individuals with developmental disabilities are frequently excluded from social opportunities (Bigby, 2012). As a result, they may be less likely to participate in activities that take place outside of school or their homes (Taheri, 2015). All youth with disabilities must be encouraged to participate in recreational activities, regardless of the barriers that may limit their involvement. Adults, including families and educators, should encourage youth to find programs and activities that are in their areas of interest. Families and educators can assist youth with disabilities by helping remove barriers that discourage them from participating in recreational programs. King et al. (2003) advises interested community members to consider environmental factors (e.g., the physical accessibility of buildings and attitudes of community members), family factors (e.g., parents' own interests in recreation), and child factors (e.g., the child's physical function or social competence) when developing an inclusive recreational program for all.

Services that Address Basic Needs and Barriers to Employment

Housing

Many youth experience unstable housing situations or homelessness during adolescence or young adulthood. The rate of housing instability and homelessness among youth varies based on how data is collected by various institutions. Using data from the U.S. Department of Education, Child Trends (2015) estimated that approximately 1.4 million students ages 6 to 18 were reported as homeless by their school districts during the 2013-2014 school year. Eighteen percent of the students who schools reported as homeless were between the ages of 13 and 18 (Child Trends, 2015). Students were considered to be homeless if they were identified as living in any of the following unstable situations: shelters, motels or hotels, doubling up with other families, or living in places unfit for human habitation (e.g. car, abandoned building) (Child Trends, 2015). However, other homeless youth are "unaccompanied," meaning they have separated from their families for various reasons (Child Trends, 2015). The Department of Housing and Urban Development's 2014 Point-in-Time (PIT) count estimated that 45,000 unaccompanied children and youth under age 25 were homeless on a given night (USICH, 2016). The National Alliance to End Homelessness (2012) estimates that a much higher number of youth age 18 and younger – 380,000 – experience homelessness for one week or more in a given year. According to postsecondary student data, over 56,000 students identified themselves as homeless on their Free Application for Federal Student Aid (FAFSA) in 2014 (Broton & Goldrick-Rab, 2013; Douglas-Gabriel, 2016). According to data from the Runaway and Homeless Youth Management Information System, about one fourth of youth in transitional living programs are pregnant or parenting (USICH, 2016).

There is no single system of housing services, youth service professionals may connect youth with one or more of the following housing assistance options: emergency shelters, transitional housing, and supported permanent housing. The Runaway and Homeless Youth Act (RHYA) supports basic center programs and transitional living programs targeted to youth throughout the U.S. Basic centers offer emergency shelter for up to 21 days and other services to youth ages 18 and younger. Transition Living Programs provide youth ages 16 to 22 with longer term (up to 18 months) housing options such as "…host family homes, group homes, maternity group homes, or supervised apartments owned by the program or rented in the community" (USICH, 2016, p. 6). Youth may also receive assistance through the U.S. Department of Housing and Urban Development's programs, including affordable housing programs, the Emergency Solutions Grants (ESG) program, and the Continuum of Care (CoC) program (USICH, 2016).

For some youth with disabilities and their families, getting their housing needs met means finding and securing housing that is not only affordable but also accessible and, in some cases, supportive. According to the National Council on Disability (2010), there is a lack of information about the accessibility of both public and private sector housing which poses challenges to determining whether the housing supply aligns to the needs of individuals with disabilities. In

addition, the report highlights the following housing-related needs that may pose barriers for some individuals with disabilities: basic home modifications (e.g. handrails, ramps, wider doorways, accessible bathrooms); avoiding environmental triggers for those with chemical sensitivity; assistance in the home with daily living activities (e.g. cooking, bathing, dressing); and community-based housing with supportive services for individuals with psychiatric disabilities. Access to supportive housing options (e.g., Greenwood, Stefanic, & Tsemberis, 2013) is important for individuals with disabilities who need individualized assistance specific to their daily living needs. Koenig (2015) explains that "…supportive housing can be structured many ways but ultimately provides a combination of affordable housing with wrap-around supportive services in a variety of settings based on the needs of the person with disabilities" (p. 5). There is a need for a stronger and more effective "…cross-coordination of housing with community living and support systems, funding, and service delivery" market for individuals with disabilities (National Council on Disability, 2010).

Transportation

Transportation can be a big barrier to youth in accessing support services, getting to education and training programs, and starting their first job (Lauver, Little, & Weiss, 2004; Jain, Conway, and Choitz, 2015; American Public Transportation Association, 2012; Trekson, 2016). In surveys with youth program providers and participants, transportation is one of the most often mentioned barriers for youth (Trekson, 2016; Jain et al., 2015). Youth may not have regular access to a vehicle and must rely on rides from others, borrowing vehicles, public transportation, or sticking to areas that they can walk to daily (Jain et al., 2015). These options can vary greatly in their availability and accessibility. In some areas, youth may live in a community where they can access most places by public transportation, but in rural areas, access to places might be more limited due to less transportation options (Brooks, Edrington, Sharma, Vasishth, & Cherrington, 2014). In places with a robust system of public transportation, the expense of bus and train fare can add up quickly, and some students may not have the resources to pay for transportation to and from additional activities. While the school district may provide transportation to and from school, youth who want to participate in programs or clubs that meet before or after school are often responsible for their own transportation (Lauver et al., 2004; Brooks et al., 2014). Youth programs frequently find it difficult to secure transportation for their participants due to its expense and the challenge of ensuring the safety of the youth (Lauver et al., 2004). By working with local transportation agencies in the community to subsidize some of public transit costs for young people or providing transit vouchers, schools and other youth service providers can ease some of the transportation barriers for youth (Lauver et al., 2004). Helping youth who are entering the workforce to secure transportation to get them to and from work is an important part of supporting their beginning work experiences (Jain et al., 2015).

For youth with disabilities, access to transportation requires additional considerations. Individuals with disabilities also need access to travel training, the "…ability to get to places outside home independently" (Carter, Austin, & Trainor, 2012, p. 52). Travel training has been

associated with both positive post-school outcomes and post-school employment (NTACT, 2016). If a youth has not been trained in how to get around, it will be difficult for them to gain the work and developmental experiences needed to prepare for the transition to adulthood. As with all youth, reliance on family members and friends for rides can limit their ability to connect to services and opportunities in the community. Even with a positive work history, the likelihood of being employed is reduced if a youth is experiencing difficulty with transportation (McDonnall, 2011). Conversely, young adults with disabilities who found transportation to be easy were 2.4 times more likely to be employed (McDonnall, 2011). While travel training may be provided to youth with disabilities who are in middle school and high school through their Individualized Education Program (IEP), additional support may be needed outside of the school setting for comprehensive travel training. The National Aging and Disability Transportation Center (NADTC) and the Easter Seals Project Action (ESPA) provide information and support around travel training and accessing transportation for individuals with disabilities (NTACT, 2016). Some youth with disabilities in education and training programs may also need to learn how to navigate their way around their learning environment (e.g. school, campus, training site), especially if it is a large or confusing place to find one's way around.

Nutritional Assistance

Roughly 6.8 million youth (ages 10-17) are food insecure, and another 2.9 million are very food insecure (Popkin, Scott, & Galvez, 2016). Food insecurity refers to a lack of consistent or reliable access to enough nutritious and affordable food. In 2015, 17% of households with children and youth had either low or very low food security (ChildTrends, 2016). In the most recent reporting from the United States Department of Agriculture (USDA), the term "food insecurity" has been replaced by low food security and very low food security (USDA Economic Research Service, 2016). Low food security is defined as "…reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake" (USDA Economic Research Service, 2016). Very low food security is defined by the USDA Economic Research Service (2016) as "…reports of multiple indications of disrupted eating patterns and reduced food intake." In reports from both groups, people worry that their food will run out and that they will be unable to buy a balanced meal. Individuals with very low food security report having to reduce the size of or skip a meal, eating less than they feel they should, and being hungry. Young adults with disabilities are more likely to live in households experiencing low food security even when receiving income support from the Social Security Administration (Brucker, 2016). According to the data, 32% to 50% of youth with disabilities live in households with food insecurity compared to 13% to 15% of youth without disabilities (Brucker, 2016). Even when controlling for the effects of poverty, young adults with intellectual and developmental disabilities face low food security at significantly higher levels than their peers without disabilities (Brucker & Nord, 2016).

Food insecurity has been found to have a number of effects on youth. Popkin, Scott, & Galvez (2016) shared that teens experiencing food insecurity actively work to keep it a secret,

fearing shame that they may experience if their food needs were known. Teens who are experiencing food insecurity may try to figure out ways to make their food last longer, to have more for their families, and to find ways to earn money in order to buy food. Some teens may want to try to obtain a formal job; however, the inability to find a job may lead some youth to shoplift or engage in other criminal behaviors to acquire money for food. Some teens even mentioned "…going to jail and failing school as viable strategies for ensuring regular meals" (Popkin et al., 2016, p. vi). Food insecurity among young adults has been found to coexist alongside depression, suicidal ideation, and substance use problems (Pryor, Lioret, van der Waerden, Frombonne, Falissard, & Melchior, 2016). Reducing the levels of food insecurity during young adulthood may help reduce mental health problems in the future. Food insecurity among youth has implications on their lives beyond their limited access to daily food and nutrition, and these include effects on mental health and on decisions that could negatively impact their future. A comprehensive approach is needed to support youth who are experiencing food insecurity that makes considerations for their privacy.

Childcare

Pregnant and parenting youth often require support services related to parenthood, including access to quality childcare, maternal and child health care services, parenting skills education, and other forms of support for their parenting role and responsibilities. In addition, they need ongoing encouragement to continue pursuing their education and employment goals and flexible options to do so. Unfortunately, their educational pursuits are sometimes thwarted by a lack of services as well as structural barriers and discrimination within educational institutions (Einhorn, 2015; National Women's Law Center, 2012). In this decade, the birth rates among teens (ages 15-19) and young women (ages 20-24) have steadily declined; however, becoming a parent during adolescence and young adulthood is more prevalent among youth from racial and ethnic backgrounds (Hamilton, Martin, Osterman, Curtin, & Mathews, 2015; Centers for Disease Control and Prevention, 2016). Females in the foster care system are significantly more likely than other teen girls to become pregnant (Lieberman, Bryant, & Boyce, 2015). A longitudinal study found that 50% of the females in foster care experienced a pregnancy by age 19 (Lieberman, Bryant, & Boyce, 2015; Courtney et al., 2005).

Lack of affordable childcare poses a significant barrier to achieving educational goals and retaining employment for low-income parents (Spaulding, 2015). A research study conducted by the Urban Institute examined common challenges and strategies for supporting the childcare needs of low-income parents in education and training programs (Adams, Derrick-Mills, & Heller, 2016). Adam et al. (2016) profiled 17 programs and initiatives to identify strategies they use to assist low-income parents pursuing education and training with meeting their childcare needs. The study identified a complexity of challenges that low-income parents often face in securing childcare, including the following:

- high cost of childcare and limited availability of childcare assistance due to insufficient public funding to meet the demand;
- a limited supply of high quality child care including fewer quality options for meeting specific needs such as non-traditional schedules and care for children with disabilities;
- aligning their own schedule of education, training, and/or work commitments with childcare provider schedules;
- arranging transportation between the childcare provider's location and the location of their work or educational setting;
- lack of information about childcare options; and
- policies and practices of workforce development and childcare assistance programs that create barriers to parents' participation in education and training (Adams et al., 2016).

Adams et al. (2016), in reviewing the programs for low-income parents, recognize the importance for "…cross-system collaboration, linkage, and communication" (p. xii) among providers. Often programs commonly assist young parents with learning and applying for publicly or privately funded childcare subsidies and other forms of childcare assistance (Adams et al., 2016). Some preliminary research indicates that receiving childcare subsidies has a significant positive effect on the employment retention of single mothers (Matthews, Schulman, Vogtman, Johnson-Staub, & Blank, 2015). In addition to subsidy services, programs also offer services such as assessing community-wide needs and identifying various partners with a shared commitment to supporting families, structuring and scheduling workforce development activities to facilitate access to childcare, assessing childcare needs as part of intake and planning and provide ongoing support, helping parents understand and find childcare options in their community, and facilitating access to a supply of affordable care (Adams et al., 2016). Pregnant teens can access childcare services and additional supports through their schools (e.g., Pregnancy Assistance Fund (PAF)), state and local agencies (e.g., Maternal, Infant, and Early Childhood Home Visiting Program), and community-based organizations (Maternal and Child Health Bureau, 2015; Office of Adolescent Health, 2016b).

Training and Support for Independent Living

Independent Living and Life Skills Training

Youth service professionals recognize the need to train, support, and develop independent living skills (viz., life skills) in transitioning youth. For example, the child welfare system prioritizes the development of independent living skills for current and former foster youth. States receive federal funding from the John H. Chafee Foster Care Independence Program (viz., Chafee Program), administered by the Administration for Children and Families, specifically for

the purpose of providing independent living services to current and former foster youth (Koball et al., 2011). Programs serving out-of-school youth (viz., opportunity youth) indicate that a lack of life skills is a common barrier to success in education and employment (Geckeler, Betesh, Chavoya-Perez, Mitnick, & Paprocki, 2015). These programs may offer training or coaching to assist youth with learning various life skills such as financial management skills, conflict resolution, time management, and parenting (Treskon, 2016; Melchior, Curnan, & Lanspery, 2013). The Council of State Governments Justice Center (2015) shares that the lack of life skills is a significant barrier to self-sufficiency among youth within juvenile justice system. Several studies in the special education field have identified effective strategies for increasing independent living skills (Alwell & Cobb, 2009). Multiple studies support the conclusion that independent living skills are a predictor of positive post-high school outcomes among students with disabilities (Test et al., 2009). In addition, the Institute of Education Sciences found that using evidence-based strategies to teach functional life skills to students with intellectual disabilities increases students' independent living skills (Cobb et al, 2013). In further support of developing independent living skills, Test, Bartholomew, and Bethune (2015) recommend providing students with disabilities with "…explicit instruction on leisure, self-care, social skills, and other adaptive behavior skills" (p. 268).

The special education field is robust with evidence on programs and interventions in developing life skills in youth; however, there is limited evidence on what specific interventions work for youth in other systems and settings. For example, a multi-site evaluation of the Chafee Program found no differences in outcomes among foster youth who participated in independent living programs and control groups (Koball et al., 2011). However, the evaluation provided some insights on independent living skills development and demonstrated the need for additional research. Youth service systems (e.g., child welfare system) could benefit from learning from other fields (e.g., disability field) that have been engaged in development of independent living skills. For example, within the special education system, the Centers for Independent Learning (CILs) are an underutilized resource for assisting youth with disabilities transitioning to adulthood. In a national survey of CILs, 65% reported providing transition services to youth, including independent living skills training; however, only 19% indicated that they are involved often or very often in local or state transition initiatives, and less than half rated their level of coordination with local education agencies as good or outstanding (Plotner, Oertle, Reed, Tissot, and Kumpiene, 2017). Test, Bartholomew, & Bethune (2015) indicated that youth with disabilities who connected with CILs and other adult service agencies before they left high school improved their education and employment outcomes. It's important to consider cross-system collaboration, even within the same field, to learn and gather resources to benefit all youth, including youth with disabilities, in developing independent living skills.

Financial Capability Skills Training and Services

Developing financial capability is an important part of young people's preparation for the transition to adulthood. Financial capability is "…the capacity, based on knowledge, skills, and

access, to manage financial resources effectively" (Department of the Treasury, 2010, p. 1). The importance of providing financial literacy education has been reflected in the recent workforce-related legislation. The Workforce Innovation and Opportunity Act (WIOA) established five new youth-related program elements that must be made available to all youth participating in a local WIOA youth program and service. Financial literacy education is one of those new program elements. Workforce programs cannot rely on the delivery of financial literacy-related documents as the sole method of providing financial literacy education. Therefore, WIOA (2014) encourages local workforce programs to consider different methods in delivering the financial capability material to youth. However, evidence on the effectiveness of financial literacy programs is lacking (Edelstein & Lowenstein, 2014). Given that financial literacy is a relatively new field, there have been few rigorous impact studies to date and the existing studies largely rely on self-reported changes in attitudes and knowledge (Edelstein & Lowenstein, 2014).

As noted earlier, WIOA supports the need to customize financial literacy education by stating that local workforce areas must implement other approaches to help participants gain the knowledge, skills, and confidence to make informed financial decisions that enable them to attain greater financial health and stability by using high quality, age appropriate, and relevant strategies and channels, including, where possible, timely and customized information, guidance, tools, and instruction (WIOA, 2014). The literature on financial literacy education and financial capability programming mostly focuses on developing "…motivation, knowledge, and skills to save money, manage money, and build savings and assets" (Edelstein & Lowenstein, 2014, p. 4). According to the literature, financial literacy and capability content has been delivered to youth and young adults by incorporating different teaching methods such as active learning, direct experience, role playing and/or simulation (Gardner & Korth, 1997; Edelstein & Lowenstein, 2014; Haskell, 2001; Mittapalli, Belson, Ahmadi, 2009; Suiter & Meszaros, 2005; Varcoe & Fitch, 2003). In addition to diversifying the content, programs should consider collaborating with parents, family members, mentors, and friends in teaching financial capability concepts. Serido, Shim, Mishra, and Tang (2010) share that high quality conversations, from family members to youth, on financial literacy topics lead to increases in a youth's "…financial, psychological, and personal well-being" (p.453). Therefore, having people who are important in a youth's life is an important factor in teaching and reinforcing financial literacy concepts.

Educational Opportunities, Services, and Support

Postsecondary Education Planning, Enrollment, and Support

Many youth who have completed or exited high school need assistance connecting to educational opportunities that match their current academic level and goals. Youth who have already earned a high school credential or are preparing to graduate from high school may require assistance with choosing and enrolling in a program of study at a postsecondary

education institution to pursue a degree or certificate. Ideally, all students explore options and make a plan for postsecondary education with assistance from their high school before they graduate. Unfortunately, not all students receive support from their high school for making a postsecondary education plan due to an insufficient number of school counselors and low expectations for what students can achieve (Tsoi-A-Fatt Bryant, 2015). Even when they have received postsecondary counseling, many students do not transition into postsecondary education immediately after high school. The high cost of postsecondary education is a common factor in decisions to delay postsecondary enrollment (Kolodner, 2015). In fact, there was a decline in college entry following high school between 2008 and 2013: 66% of all high school graduates in 2013 immediately enrolled in college compared to 69% in 2008. The decline in college entry was even more pronounced among low-income students: 46% in 2013 compared to 56% in 2008 (Hartle, 2015). Youth who have completed high school but have not entered college could benefit from counseling on postsecondary education options relevant to their career interests and goals as well as assistance with applying for financial aid.

High School Re-Engagement, Credit Recovery, and Equivalency Options

A significant proportion of youth leave high school without a diploma or other credential, some due to dropping out and others due to aging out, before meeting the requirements for a high school credential. According to the National Center for Education Statistics (NCES), 6.4% of 16- to 24-year-olds without disabilities and 14.9% of those with disabilities in 2013 were not enrolled in school and lacked a high school diploma (McFarland, Stark, & Cui, 2016). These youth often need assistance connecting to programs that assist individuals in recovering credits to earn a high school diploma or to complete a high school equivalency (HSE), such as a GED, HiSET, or TASC (Shaffer, 2015). High school credit recovery options are offered by most states while some states also offer a competency-based diploma system (Shaffer, 2015).

Youth who dropped out and are still young enough to qualify for public school could benefit from assistance to re-engage in school (Treskon, 2016). Some school systems and community organizations offer this assistance through a reengagement center or program, "…a site or entity that conducts active outreach to encourage out-of-school youth to return to school and assists such youth in resuming their education" (Rennie-Hill, Villano, & Feist, 2014, p. 9). Reengagement centers typically have three functions: conducting outreach to youth who have disconnected from school, assessing their educational and social support needs, and referring or assisting youth to enroll in the most appropriate education and training option available that fits their individual needs (Rennie-Hill, Villano, & Feist, 2014). Some centers also provide wraparound services and ongoing case management for a period of time to ensure youth are successful in their new education placement. While reengagement centers are not available in all communities, many school systems provide dropout recovery and reconnection services in other forms.

Literacy Skills Instruction

Youth may need opportunities to develop their basic academic skills, in particular literacy skills. Often, young people who are disconnected from education and work may have low literacy skills. There is a significant disparity between the literacy levels of students with and those without disabilities. According to the results of the 2013 National Assessment of Educational Progress (NAEP), 65% of students with disabilities in 8th grade scored below basic on the reading assessment compared to 19% of students without disabilities (NCES, 2013). Low literacy skills are a significant barrier to completing the education credentials needed to obtain employment when young people are unable to meet the eligibility requirements for enrollment in high school equivalency programs or postsecondary education courses.

Literacy skills instruction is offered in a variety of settings, including adult basic education programs, high school equivalency programs, community colleges, English language learning programs, and job training programs (National Research Council, 2012). Rigorous research evidence on program models or strategies to improve literacy among adolescents and adults is lacking (Treskon, 2016; National Research Council, 2012). Youth with low literacy skills may benefit from connecting to alternative schools or adult education programs such as bridge programs and career pathway programs (Treskon, 2016). Currently few programs exist for older youth (ages 16 to 24) with the lowest academic levels; however, research indicates that programs designed to accelerate literacy gains among this sub-group have had some positive results (Hossain & Terwelp, 2015; Treskon, 2016).

College Bridge/Concurrent Enrollment Programs

Youth who have literacy skills high enough to pursue a high school equivalency may benefit most from promising strategies such as the equivalency-to-college bridge program (bridge) model and concurrent enrollment programs. Bridge programs provide contextualized academic instruction toward achieving a high school equivalency within a college campus environment (Treskon, 2016). Academic course work is delivered using career-specific materials and examples to make learning more relevant to the students' career goals. Students participate in college preparation activities such as counseling on career and college options as well as success strategies. In concurrent enrollment programs, students have the opportunity to complete their high school equivalency and take college classes at the same time. Evaluations of I-BEST, a concurrent enrollment program, and the GED Bridge to Health and Business program, an equivalency-to-college model, indicate that these contextualized learning approaches may increase rates of obtaining high school credentials, enrolling in postsecondary education, and earning college credits (Martin & Broadus, 2013; Zeidenberg, Cho, & Jenkins, 2010; Treskon, 2016). Contextualized learning strategies are also recommended for improving literacy outcomes among students with learning disabilities (National Joint Committee on Learning Disabilities, 2008).

Services and Support Tailored to Individual Circumstances

ELL and Migrant Youth

Community-based organizations and workforce training programs should consider the needs of English language learners and incorporate their needs into their programming. In supporting transitioning youth, youth from migrant families with limited English proficiency may need specific support and resources to navigate their transition to adulthood. Access to education is an important part of the integration process of migrant youth, but limited English language skills may serve as a barrier to students' access (Mather & Foxen, 2016). In public schools, the number of Latino students has increased dramatically since 2000. In 2014, the majority (76.5%) of English language learners enrolled in public schools were Spanish-speaking (Mather & Foxen, 2016). While there have been gains in the graduation rates of Latino students, educational disparities among Latino students still exist and persist, affecting postsecondary access and preparation. Eighth grade reading proficiency among Latino students was only at 21% in 2014 (Mather & Foxen, 2016). Educational disparities of Latino youth can begin in childhood and could impact their educational success throughout their adolescence and young adulthood years; this can be seen through lower test scores and higher dropout rates resulting in reduced opportunities in future career and earnings options (Mather & Foxen, 2016). A number of factors impact the educational success of Latino youth, such as their parents' educational attainment, their parents' English language proficiency, and the circumstances surrounding their immigration to the United States (Mather & Foxen, 2016).

Limited English language skills and a migrant's legal status can cause barriers to success in other areas of life beyond education. Migrants and their families may face obstacles to healthcare due to the complex and unique language, and they may be concerned about the immigration-related legal challenges (Mather & Foxen, 2016). Poverty is a persistent problem among Latino children which has only increased since the recession. In 2014, 32% of Latino children lived in poverty (Mather & Foxen, 2016). A family's immigration status affects the support they may be able to access as a family living in poverty. For those who are eligible to receive public benefits, language barriers, a lack of information, and fear of legal ramifications serve as barriers to accessing these services (Murphy, 2016). Additionally, while the children in a family may have been born in the United States, concern about the immigration status of their parents and losing their parents if their status becomes known can add to the children's stress and reduce their willingness to seek help or assistance (Murphy, 2016). It is recommended that any information about public benefits should be written in an accessible language and shared with organizations who are experienced in working with migrants. Lastly, for some youth, the experiences and circumstances surrounding their migration to the United States may have involved the experience of trauma, and they may need support and resources to work through their experience (Murphy, 2016).

Veterans

There are large numbers of young veterans between the ages of 18 and 24 returning from military service who are looking to reenter the civilian workforce. In 2011, nearly 30% of the veterans, ages 18 to 24, were unemployed (Kleykamp, 2013). There is little research to definitively answer why young veterans face unemployment, but a number of factors have been proposed. The work experience that veterans have gained in the military does not always translate into language that civilian employers understand (Kleykamp, 2013; Taylor, 2016). Veteran unemployment is a complex issue with some employers voicing a preference to hiring veterans and others being unsure (Kleykamp, 2013). In addition, considerations need to be made for the rising proportion of female veterans and other demographics of veterans. While Kleykamp (2013) found overall that veteran young adult unemployment was higher than that of their civilian peers, the difference was the steepest among female veterans when compared to their civilian peers. For African American veterans, military service was found to positively impact their employment outcomes when compared to their civilian peers (Kleykamp, 2013).

Young veterans are interested in finding gainful employment. American Job Centers (AJCs) have a comprehensive menu of workforce-related programs and services as well as dedicated staff members who are assigned to support veterans with and without disabilities. They have supportive services that focus on housing, transportation, health care, and child care. The services offered by AJCs may also be helpful to veterans' family members. AJCs have several programs designed to address the support needs of veterans with disabilities and their family members. These include the Disabled Veterans Outreach Program (DVOP), which funds state personnel positions that provide intensive employment services to disabled and other high-need veterans, and specialized support for veterans within the Transition Assistance Program (TAP) and Work Opportunity Tax Credit (WOTC). In addition, veterans with disabilities have access to rehabilitation counseling and all DOL-funded training programs (Collins et al., 2014; Frain, Bethel, Bishop, 2010). These programs and services offer veterans with disabilities opportunities that facilitate reintegration into their communities.

Legal and Advocacy Assistance

For some youth, the legal system is a present and visible part of their life, but for others the ways in which legal services could assist them may be a little more hidden. Youth service professionals require an understanding of how the legal system impacts the lives of youth and the need for supporting all youth in accessing legal services appropriate to their needs. For youth involved in the juvenile justice system, getting access to legal services is an important part of ensuring that they are fairly represented in the criminal justice system. Youth who have been involved in the juvenile justice system may have trouble getting a job, joining the military, or getting financial aid for postsecondary education (Juvenile Law Center, n.d.). Working with legal services to have their record expunged can be a vital asset to meeting their future educational and career goals. Homeless youth may not realize how their daily challenges are related to the legal system (National Clearinghouse on Families and Youth, 2016). Legal support for homeless youth may involve access to public benefits, access to affordable housing, expungement proceedings,

custody issues, school enrollment, or fair employment and pay. By helping homeless youth to understand their legal rights and connecting them to legal services, youth can be supported to work past some of the barriers that are getting in the way of their ability to reach their goals. LGBTQ youth in state custody need to understand that they have the same right as all youth to the protection of their physical, mental, and emotional well-being while they are in state custody, including a right to services that prevent harm and a right to monitoring and supervision (Estrada & Marksamer, 2006). LGBTQ youth may need assistance to learn about their rights and to access legal services if their rights were violated. The prevalent prejudice and misinformation around youth identifying as LGBTQ makes them vulnerable to ill-treatment that may be harmful.

Access to legal services for youth with disabilities and their families, when needed, ensures that disability-related services are delivered within the education system and the workforce. Many families may find it necessary to seek legal services to ensure their child receives the appropriate educational activities (Wakelin, 2008). Unfortunately, legal representation can be difficult for many families to obtain due to the high cost of private practices, eligibility restrictions associated with services offered to low-income individuals, and limited staff capacity among the available legal service providers (Wakelin, 2008). With funding from the U.S. Department of Education, parent training and information centers and community parent resource centers serve as resources for families who need dispute resolution assistance related to the special education process. Alternative methods of dispute resolution such as mediation can help avoid costly litigation (U.S. Department of Education, n.d.). However, there are situations when the parent centers are unable to mediate the problems between a parent and the school and a legal service entity must intervene on behalf of the parent. In a limited capacity, Protection and Advocacy, Inc., Community Alliance for Special Education, Legal Service Corporation (LSC) (i.e., low-income families), and Legal Advocates for Children and Youth (i.e., only juvenile justice court cases) provide free legal services to families and youth (Mass & Rosenbaum, 2005).

Disability Related Services

Assistive technology. For some youth with disabilities, Assistive Technology (AT) is a necessary support that enables them to work alongside their peers in an inclusive setting (e.g., school or work) as well as complete their tasks independently. AT covers a wide range of things such as mobility tools, speech-to-text programs, magnification devices, screen readers, and recording devices. AT is a specific resource for individuals with disabilities, and its usefulness is reliant on an appropriate match between the individual's needs and the technology (Field & Jette, 2007). Some devices may involve complex technology while others may be simple, but all provide assistance to support the independence of individuals with disabilities.

IDEA requires school districts to provide and pay for AT (Mittler, 2007). As they transition out of high school, youth need support, information, and guidance on how to access AT outside of the school system (Lamb 2003). Young adults with disabilities can contact their

local Vocational Rehabilitation agency or Assistive Technology Act program to get the AT, but they may need support from an adult ally to navigate this system. Adult agencies may require additional or different documentation than that provided by the school system, and the AT available may be different. Navigating a new office with new responsibilities can be a challenge for anyone, and any preparation in high school to get youth prepared to access disability services as adults can help ease some of the challenges (Connecticut Department of Education, 2014). WIOA legislation requires more collaboration between special educators and vocational rehabilitation counselors designed to ease the transition and encourage the use of AT throughout the transition years (WIOA, 2014). It is important for all stakeholders to ensure an accurate AT matching to the individual's needs with proper training to deliver the best chance for success in the postsecondary environment (Field & Jette, 2007).

Benefits counseling. During the transition to adulthood, some youth with disabilities may need assistance to obtain and make decisions about disability-related benefits such as Supplemental Security Income (SSI), Social Security Disability Insurance (SSDI), and/or other disability program benefits. Federal government agencies that provide employment-related programs and services to persons with disabilities, directly and indirectly, have taken notice that employment outcomes are lower for youth who receive disability benefits compared to other youth with disabilities. As a result, agencies are implementing strategies designed to improve those results. Luecking and Wittenburg (2009) reported that youth who received SSI benefits had lower employment outcomes compared to other youth disabilities but noted that it could be due to their lack of work experience. Many families fear losing their youth or young adult's disability benefits, healthcare, and/or community supports. Therefore, some families will not encourage youth or young adults to seek employment. Benefits planning/counseling and the use of work incentives (e.g., Social Security Administration's (SSA) Work Incentives Planning and Assistance (WIPA) Program) can alleviate the fears associated with losing disability benefits (Kregal & O'Mara, 2011). Research indicates that people with disabilities receiving work incentives and benefits counseling can achieve better employment outcomes (Kregel & O'Mara, 2011) and earn higher wages (Tremblay, Smith, Xie, & Drake, 2006). Therefore, more states and local communities are developing program capacity beyond the SSA-funded WIPA program.

Personal assistance services. Personal Assistance Services (PAS) enable some youth with disabilities to exercise independence at home, at school, in training programs, and in the workplace (Targett, Wehman, West, Dillard, & Cifu, 2007). Individuals with disabilities may use PAS for personal, self-care needs such as bathing, dressing, running errands, cooking, or cleaning and/or for assistance in training or the workplace such as in travel, decision-making, reading print materials, or providing a sign language interpretation during meetings. As with AT, the use of PAS is specific to the individual with a disability and their needs. Youth who may have had the support of a paraprofessional in high school and assistance from a family member with their daily personal care tasks become responsible for hiring their PAS as they transition into adulthood.

In managing their own PAS, youth will need to know what services are needed from a PAS each week (National Collaborative on Workforce and Disability for Youth, HeiTech Services, & Concepts, 2010). Youth will need to be informed on how to pay for their PAS and how to find possible PAS to interview. Youth will need to be prepared and comfortable to interview PAS as well as discuss sensitive topics. If a PAS is hired, but things are not going well, the youth must learn how to navigate hard conversations with the possibility of firing that PAS. All of these skills are critical for youth and young adults in accessing and managing a PAS to live independently. These responsibilities may be overwhelming, but with support and preparation, youth and young adults with disabilities can understand their rights and responsibilities and learn to advocate for their needs within the adult system.

Cross-Cutting Practices that Facilitate Connecting Activities

Collaboration and Coordination among Service Providers

Connecting activities serve the dual purpose of linking youth and their families with community resources to address their needs and goals and enhancing collaborations between the entities that serve youth, including between schools and other service agencies (Favela & Torres, 2014). The latter objective—commonly referred to as interagency collaboration—serves to increase service coordination across disparate but highly related service systems that youth and families may come into contact with during transition to adulthood. The delivery of high quality interagency collaboration benefits all youth and young adults:

> When multiple systems are involved in a young person's life, unintentional barriers to well-being are often created as a result of a lack or perceived lack of clarity around roles and jurisdictional issues, or a lack of communication and coordination between the various systems. When lack of clarity exists, accountability for well-being outcomes drops. Each system simply retreats to their own realm of responsibility, carrying out its own job duties and roles without a clear understanding of how or if these duties and roles relate to the larger question of well-being for the young person involved. Every system that serves youth and young adults has a critical role and responsibility in supporting comprehensive, holistic, and lifelong well-being. Clearly articulating those roles and responsibilities benefits not only individual young people who are served, but also the ability of each specific system to achieve its own goals and desired outcomes. (YTFG, 2015, p. 6)

Multiple youth-serving systems recognize the need for and value of collaboration and coordination with other service providers and systems. In the education sector, school-community partnerships are considered a promising school reform strategy (Valli, Stefanski, & Jacobson, 2014). One school-community partnership model, Full-Service Schools, aims to integrate academic, social, health, and other services for students and families within the school

environment. Strong partnerships between adult basic education, occupational training, employers, postsecondary institutions, and support service providers are essential to developing career pathways (Employment and Training Administration, 2016). Supportive services are a key element of career pathways in order to ensure that youth and adults have the assistance they may need to persist in education, training, and employment (Stephens, 2009). Laird and Holcomb (2011) identified collaboration as a condition for effective case management in the workforce development system. The ability of case managers in workforce development programs to connect youth to various supportive services depends upon establishing relationships with other service providers (Laird and Holcomb, 2011). Community colleges and local youth-serving organizations report that they have been able to improve their services to youth attending college by partnering with one another (Melchior, Curnan, & Lanspery, 2013).

Special education transition research indicates that interagency collaboration is a predictor of positive education and employment outcomes among students with disabilities (Test, Bartholomew, & Bethune, 2015). At the same time, the Government Accountability Office has identified service coordination among the various federally funded service providers as a persistent challenge (2012). This is demonstrated by a 2016 study which found that service providers who were not school staff, including Vocational Rehabilitation and Mental Health professionals, rarely participated in the transition planning process for high school students with emotional disturbance (Wagner et al., 2016). Recent contributions to the special education literature have emphasized the need for empirical testing and evidence-based practices to support interagency collaboration and coordination practices (Cobb & Alwell, 2009; Cobb et al., 2013; Landmark, Ju, & Zhang, 2010; Oertle & Seader, 2015; Test et al., 2009). Fabian and Luecking (2015) analyzed a collaboration-focused model demonstration program which required research demonstration sites to establish interagency transition teams consisting of local Vocational Rehabilitation (VR) field counselors, local VR supervisors, transition personnel from local school districts, representatives from adult service agencies, post-secondary education personnel, workforce staff, and family advocacy group representatives. The authors used two different empirical constructs of "collaboration" (one focusing on stakeholder perceptions of team synergy, empowerment, trust, and conflict resolution and one focusing on task-oriented "levels of collaboration," such as sharing of responsibilities, decision-making, and resources). Fabian and Luecking (2015) concluded that "inter-agency collaboration is not a straightforward concept…different ways of defining and operationalizing it impact employment outcomes in transition" (p. 3). Specifically, the analysis showed that high scores on the task-oriented collaboration indicator were significantly related to better transition outcomes, whereas high scores on the "synergistic" indicator were not (and were, surprisingly, negatively statistically correlated) (p. 3).

Individualized Service Planning

Individualized or person-centered planning is another common practice that facilitates youth connections to various support services and opportunities. All youth need to get connected

to the services that provide support for their individual needs. Each youth brings with them a variety of skills, experiences, needs, and interests that make the specific services different for each youth. In order to support all youth in their transition to adulthood, service providers can use individualized service planning to assist youth with developing an understanding of their strengths, needs, specific interests and dreams and how to access the services and supports to help them reach their individual goals. The development of an individualized service plan is often a part of an effective case management in its role to "…help youth navigate through the complex maze of programs, services, and educational options to choose the set of services that best suits the youth's situation" (Hastings, Tsoi-a-fatt, & Harris, 2010, p. 11).

While there may be some similarities among some groups of youth, it is important to recognize that there are a wide range of interests and experiences for each individual youth. Disconnected youth, those who are not involved in education or the workforce, often have not followed a streamlined path through adolescence that would provide them with similar skills and experiences (Manno, Yang, & Bangser, 2015). The services that one disconnected youth may need to access may be very different than the services that another disconnected youth may needs to access. In order to understand what these needs are and to provide support, youth need to be involved in the planning process. Youth in foster care have cited the importance of being able to have input into their service plans (Scannapieco, Connell-Carrick, & Painter, 2007). In the same study, the youth emphasized how important it was for them to be involved in the decisions about their own future and wanted to be viewed as a "partner" in decision making. In addition, involving youth in designing their own individualized service plans promotes youth development in "…critical thinking, planning for the future, and setting realistic goals" (Scannapieco, Connell-Carrick, & Painter, p. 432).

Youth with disabilities, as discussed in School-Based Preparatory Experiences (Guidepost 1), are required to complete their individual transition plans within their individualized education program (IEP). For students with significant disabilities, supported decision making (SDM) is an important part of the individualized planning process. SDM is "a process in which individuals who need assistance with decision-making receive the help they need and want to understand the situations and choices they face, so they can make life decisions for themselves, without the need for undue or overbroad guardianship" (Supported Decision Making: An Agenda for Action 2014, p 1). According to Shogren and Wehmeyer, "Supported decision making has emerged as an alternative to traditional models of guardianship as a means to support people with intellectual disability to be maximally included in the totality of their lives" (2015, p 2). Students with disabilities need to be supported in their decisions. The best SDM approaches not only cater to the needs of the student, but they also incorporate the input and resources of the student's stakeholders and available support systems.

Support from Trusted Professionals and Other Caring Adults

Research studies indicate that the quality and consistency of one-on-one relationships between youth and the professionals (e.g. case manager, counselor, advisor) and other adults (e.g. mentors) working with them matters (Melchior, Curnan., & Lanspery, 2013;Treskon, 2016; Weigand et al., 2015). A study of postsecondary transition and success programs found that transition counselors played an integral role in students' engagement and persistence, serving "as cheerleaders, problem-solvers, disciplinarians, and even (as one put it) 'nagging parents' in the ongoing effort to help students stay on track" (Melchior et al., 2013, p. 31). Building trusting relationships between staff and youth is frequently cited as critical to the success of programs that use a case management structure to provide ongoing support and services. An implementation study of the YouthBuild program found that "positive adult relationships made some participants feel like the YouthBuild program was a family" (Weigand et al., 2015, p. 157). The authors cited staff members' backgrounds and prior experiences as important contributors to building trust and understanding between youth and staff.

Given the importance of one-on-one relationships between staff and youth, youth service providers must pay attention to the effects that staff-to-youth ratios and staff retention patterns have on these relationships. Youth program staff often report challenges with allotting sufficient time to work with individual youth who have intensive support needs, and organizational leaders cite staff turnover as a barrier to maintaining youth engagement and conducting follow-up activities (Melchior, Curnan, & Lanspery, 2013; Geckeler, Betesh, Chavoya-Perez, Mitnick, & Paprocki, 2015).

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Family Involvement and Supports

Family involvement and support is critical to ensure positive outcomes in education and employment and productive community ties for all youth. Family involvement is an essential element of transition planning as families are continuous advocates and supporters for their students whose partnership has an effect on graduation rates, employment and achievement of other post school outcomes (Wandry & Pleet, 2012). Families and youth in transition must access a wealth of information and support to ensure their youth's success (Pleet-Odle, et al., 2016). Schools and other human service systems need to recognize the families as key influencers of youth and build upon the strengths and insights that families bring to the process youth transition to adulthood. Families and youth with disabilities have the added complexities of transitioning from a system of entitlement services in the K-12 system to support services for postsecondary education, employment, and adult living (Peterson, Van Dycke, Roberson, & Sedaghat, 2013).

The literature regarding the involvement of family members of diverse students in education dates back to the early twentieth century (Crozier, 2001; Epstein, 2007; Lareau & Munoz, 2010; Sheldon, 2002). More recently, researchers have sought to quantify the importance of family involvement (Hara, 1998; Mau, 1997; Wilder, 2014). Recent research has informed the development of frameworks and taxonomies for transition that emphasize the importance of family involvement, supports, and preparation for youth transition that are person- and family-centered (Achoa & Greene, 2016; Kohler, Gothberg, Fowler, & Coyle, 2016). Meta-analyses and longitudinal research have comprehensively described the importance of family and parental high expectations and ongoing involvement with youth as they navigate a pathway toward adulthood (Jeynes, 2012; Kohler et al, 2016). For the purposes of this review, the literature on family involvement and supports is organized by the following themes:

- The impact of family expectations on post-school outcomes;
- The impact of family engagement on academic achievement and transition;
- Strategies to support culturally and linguistically diverse (CLD) families;
- Family-centered planning;
- The family's role in modeling high expectations and actively promoting self-determination; and
- Building families' knowledge and connectedness.

The Impact of Family Expectations on Post-School Outcomes

The role of family expectations have been synthesized in nearly a dozen NLTS -2 analyses, demonstrating their predictive power on post-school outcomes. Mazotti and colleagues (2015) conducted a systematic review of NLTS-2 secondary analyses highlighting the methods

of how parent expectations were predictive of youth outcomes. Family expectations were found to be predictive regarding paid work (Carter, Austin, & Trainor, 2012; Papay & Bambara, 2014) and for completion of postsecondary education (Chiang, Cheung, Hickson, Xiang, & Tsai, 2012; Papay & Bambara, 2014).

Parent expectations, by being involved in the home (Wagner, Newman, & Javitz, 2014), is also connected to youth and young adults acquiring work after high school (Doren, Gau, & Lindstrom, 2012) as well as pursuing postsecondary education. Families play a critical role in assisting youth to develop pre-employment skills by engaging youth in authentic opportunities to develop soft skills, build career awareness opportunities, and benefit from onsite structured work experiences (Kohler et al., 2016). The quality of parent-child communication about financial topics has been shown to be a predictor of their children's financial well-being later on in life (Serido, Shim, Mishra, & Tang, 2010). The attainment of postsecondary education is positively related to family involvement and expectations to the extent that positive family expectations serve as a mediator to youth autonomy in goal development and self-determination (Doren, Gau, & Lindstrom, 2012).

The Impact of Family Engagement on Academic Achievement and Transition

The relationship between parental involvement and academic achievement remains meaningfully positive across multiple definitions of parental involvement or measures of achievement (Wilder, 2014). Wilder's (2014) meta-analysis results indicated consistency across different grade levels and ethnic groups, and parental expectations of youth were found to be particularly meaningful. A meta-analysis of family engagement studies and data collection regarding youth transitions from the National Longitudinal Transition Study-2 (NLTS-2) have consistently found a relationship between family involvement and student achievement and outcomes for youth in transition (Jeynes, 2012; Newman, 2005). Parents who report involvement at home and school, including engagement in the delivery of special education services and transition planning, enable youth to reach more positive outcomes after high school (Newman, 2005; Shogren et al, 2014).

Newman (2005) examined the NLTS-2 data and found variation in parent and student attendance and participation levels in IEP meetings. Parents and school staff reported that approximately 90% of parents of middle and high school students attended the IEP meetings; however, significantly fewer parents attended transition planning meetings (Newman, 2005). The data highlighted that only approximately half of middle school and a little over two-thirds of high school parents attended those meetings (Newman, 2005).

Family engagement in IEP meetings is important in ensuring positive postsecondary outcomes. A team approach to planning transition services that includes all parties (e.g., youth,

family, faculty, service providers, and interagency staff) facilitates stronger individualized experiences that lead to college and career readiness for all youth (Neubert and Leconte, 2013). The IEP team decisions on specific services, placements, and/or courses of study relies heavily on the advice of parents and youth voice to advocate for their needs and their specific postsecondary goals (U. S. Department of Education, 2017). Therefore, all families and youth benefit from understanding by ninth grade what constitutes college-ready curriculum, and parents of youth with disabilities benefit from information on academic skills development, academic strategies, and transition planning (Kohler et al., 2016; Pleet et al., 2016).

Consistently, the family engagement research emphasizes the importance of parental involvement from school to young adulthood; however, it also highlights the need for the gradual shift of parental role, from an advocate to coach to encourage autonomy of their young person as they journey through young adulthood (Hirano & Rowe, 2016). The parental roles of decision-maker, collaborator, and instructor begin to shift to the young person as they transition to adulthood. Parents, in a follow-up study, revealed that they continued to make decisions in the development of youth's post-school goals, accessing community agencies, and acquiring resources to support their youth after they left high school (Newman, Wagner, Cameto, & Knokey, 2009). In addition, the surveys of parents of community college students with disabilities confirmed that parents still invest time and resources daily to support their children by interacting with campus offices and encouraging independence (Pena & Koku, 2013). However, the surveys revealed that parents often struggle with the limitation of Family Education Rights and Privacy Act (FERPA) and its implications for parental communication (Pena & Koku, 2013), underscoring the need to shift from advocate to coach.

It is clear that family engagement and supports are essential, however, there are no specific family engagement or family support standards that address secondary schooling, and the same can be said for standards of family involvement, preparation, and supports as youth transition to post-high school career and work (Agronick, Clark, O'Donnell, & Steuve, 2009). However, faculty and staff can provide brief, targeted training activities that can have significant impact on family behavior (Boone, 1992; Rowe & Test, 2010; Young, Morgan, Callow-Heusser, and Lindstrom, 2016).

Strategies to Support Culturally and Linguistically Diverse (CLD) Families

The U.S. Department of Education predicts that the student population will become increasingly diverse over the next several years (Hussar & Bailey, 2016). Over the past two decades, several studies have documented the difficulties of achieving collaborative relationships between schools and families who are culturally and linguistically diverse (CLD) (Harry, 2008; Trent, Kea, & Oh, 2008). Olivos, Gallagher, and Aguilar (2010) summarized barriers to school-family collaboration, including a lack of respect or acknowledgment for a family's cultural values

and views, isolation from services (e.g., rural settings), biases against low-income families, and a school environment that families consider unwelcoming. Overall, concerns have been raised that collaboration with families tends to be within the school's own values and norms framework without taking into account CLD families' values and norms (Olivos et al., 2010).

Cultural Competency Strengthens Family Outreach

To build stronger family relationships, schools must develop strategies to include all families of youth, including CLD families, in the process of collaboration, planning, and implementation of secondary transition-related activities. It is important to understand the changing nature and diversity of families from different cultures, including "widened" family circles, which extend beyond nuclear and even blood relations (Floyd & Mormon, 2014). Cultural competency in transition planning includes a nuanced understanding of the different forms of family engagement.

Olivos, Gallagher, and Aguilar (2010) developed a research-based framework for building a welcoming school environment for CLD families of students in special education, including locating English language proficiency programs to assist clients who do not speak English as their primary language. An example of utilizing multicultural counseling competencies includes asking families open-ended questions, including questions about perception of disability within their culture.

Schools should aim to raise their faculty and staff's cultural competency to address diversity in language, socioeconomics, work schedules, family structure, and other cultural components which are often under-considered in outreach activities and planning (Frew et al., 2012; MetLife Foundation, 2012). Hernandez et al. (2006) recommended that rehabilitation counseling agencies have bilingual rehabilitation counselors available to provide adequate services to clients whose first language is not that of the dominant culture, in addition to having forms and resources that are printed in various languages (Hernandez et al., 2006).

Family Environments Differentially Affect Youth in Transition

Family environments differ in how they promote advocacy and self-determination, requiring families and service providers to be sensitive to cultural and gender differences during youth transition. For example, the differences among Latino and Anglo youth and families are shown by studies that use the Family Environment Scale (FES) and the Arc Self-Determination Scale (SDS) (Rodriguez & Cavendish, 2013). Rodriguez and Cavendish (2013) learned that four of the seven FES subscales were positively associated with self-determination for Latino students but negatively associated with self-determination for Anglo students. These four were Cohesiveness, Achievement Orientation, Organization, and Control. Latino students and female students reported significantly higher levels of self-determination than Anglo students and male students (Rodriguez & Cavendish, 2013). This result is inconsistent with previous findings on

gender differences among youth with disabilities in which males scored higher than females on the SDS (Nota, Soresi, Ferrari, & Wehmeyer, 2011 in Rodriguez & Cavendish, 2013).

CLD Families and Youth Face Increased Stigma Based on Race and Disability

Students with disabilities from CLD families face additional challenges as they move from high school to employment, postsecondary education, and community living. Hasnain and Balcazar (2009) studied the impact of race, ethnicity, and support systems on the employment status of young adults with disabilities. They discovered that race and ethnicity played a significant role in employment, reporting that 71.9% of white youth were working in a community-based setting, compared with 63.8% of Latino and 50.7% of African-American youth (Hasnain & Balcazar, 2009).

Banks (2014) examined the gaps that exist in postsecondary transition through interviews of African-American college students with disabilities. Students reported that participation in transition planning services including the development of an IEP and transition goals during their senior year were underutilized by themselves and their families (Banks, 2014). Banks (2014) suggested that stigma and a lack of cross-cultural connections for racial minority students with disabilities may negatively impact their motivation and family partnerships with the school. In addition, Banks (2014) stated that (a) students believed deficit-ideologies that undermined attempts at self-determination; (b) students had inadequate information prior to transition; and (c) students often refused to access services because of competing cultural identities. The lack of access to information about postsecondary disability services in transition to a four-year university led to an unproductive first year (Banks, 2014). While little research has focused on strategies to engage African American families in transition-specific activities, researchers have noted that greater involvement in special education requires the removal of both institutional and psychological barriers (Brandon & Brown, 2009).

Family-centered Planning

The inclusion of youth and family perspectives in transition goal setting is critical to ensure students have best chance of success. To be effective, schools and community organizations must recognize that different families need to be aware of the different levels of engagement (Jeynes, 2012). At the outset of transition planning, youth and families should co-define with educators and programs the elements of engagement they value most (Jeynes, 2012; Shogren, Garnier Villareal, Dowsett, & Little, 2014). One of the aims of family outreach should be to provide support and increase self-efficacy among both the student and the family, especially for families experiencing systems-related challenges or barriers (Martinez, Conroy, & Cerreto, 2012).

According to the National Parent Center on Transition and Employment (n.d., p.1), person-centered planning is an "…ongoing problem-solving process used to help people with disabilities *plan* for their future". In *person-centered planning*, groups of people focus on an individual and that *person's* vision of what they would like to do in the future (Kim & Turnbull, 2004). Person-centered planning is a standard of practice that ensures that individuals are at the center of their own choices for their own lives (Kim & Turnbull, 2004). A person-centered approach can be expanded to a person-family-centered approach through the recognition that the road to successful independence for youth includes healthy interdependence with their family (Kim & Turnbull, 2004). This approach takes into account lifelong relationships and family cultural perspectives that should be included in planning.

Family-centered planning encourages the transition planner to pursue goals set by youth and families and shared among families, community members, and professionals (Kim & Turnbull, 2004). Extended family can also be involved in this approach, and links between families and post school agencies are developed based on family strengths (Kim & Turnbull, 2004). Kim and Turnbull (2004) advanced a model of interdependent, scaffolded planning that moves the young person from family-centered planning at a young age to a family-student combined planning during adolescence, resulting in a person-centered approach as the student becomes an adult. Person-centered approaches imply that the transition-age youth must advocate for themselves with increasing autonomy as they move toward adulthood and that families allow for this movement (Kim & Turnbull, 2004).

Person-family interdependent approaches to transition with CLD families may require additional adaptations to be effective (Achola & Greene, 2016). Assessments, such as those conducted during a transition, should include a review of family cultural background that informs the instrument used and interpretation of results (Achola & Greene, 2016). Therefore, cultural sensitivity to family hierarchy and decision-making processes vary by culture and flexibility on adaptations to the goal-setting process that reflect the family's socio-cultural and linguistic backgrounds may better meet youth and family expectations (Achola & Greene, 2016). Youth and their families benefit from engaging in transition assessments as early as middle school due to the opportunity such an assessment provides for determining whether they have similar or differing points of view regarding future careers (Lindstrom, Doren, Metheny, Johnson, & Zane, 2007).

The Family's Role in Modeling High Expectations and Actively Promoting Self-Determination

Self-determination skills are critical for postsecondary achievement and research consistently shows that parents play a critical role in ensuring the development of self-determination skills such as goal setting, decision-making, problem-solving, and self-advocacy (Getzel, 2014; Kohler et al., 2016). Davis, Palmer, and Wehmeyer (2010) state that children

learn many of the attitudes and abilities leading to self-determination by watching their families. Davis and colleagues (2010) conducted a large-scale survey study involving more than 700 parents of school-age children (ages 5-21) with intellectual disabilities or autism. The report provided tangible examples on how to develop self-determination skills using everyday situations.

Supported decision-making is an important pathway to self-determination. According to the Quality Trust for Individuals with Disabilities (2013), recommendations for achieving supported decision-making include:

- Focus on education and an expectation that all children with disabilities will develop as decision makers.
- View decision-making as a fundamental human right where the expressed interest of children with disabilities is heard, respected, and considered at an early age.
- Infuse supported decision-making into programs and policy areas that affect young people with disabilities including services through vocational rehabilitation.

The development of self-determination skills is a lifelong journey in which parents see their young adult on a path to making confident and supported decisions in both the community and school environments. High expectations from families builds their young adult's autonomy that leads to successful postschool outcomes, including paid work opportunities (e.g., internships or jobs) and postsecondary education (Doren, Gau, & Lindstrom, 2012).

Paid work. Families can equip themselves to address two of the barriers that affect the trajectories of youth with significant disabilities: low expectation for competitive integrated employment for youth with intellectual and developmental disabilities and knowledge and access to available resource and supports (Francis, Gross, Turnbull, & Turnbull, 2013). In a study of the Family Employment Awareness Training (FEAT) program, Francis and colleagues found that a face-to-face knowledge-based training program and subsequent follow-up assisted families to improve expectations. Specifically, providing young people with significant support needs and their families with multi-session training and additional program materials and information at follow-up enabled them to acquire gainful competitive integrated employment upon completing the program.

Postsecondary education completion. Studies of college students' autonomy confirm the continued role of families in ensuring self-determination and postsecondary academic success. Through surveys of families and students, Ratelle, Simard, & Guay (2012) observed that given the academic pressures postsecondary students face, parental support that encourages autonomy (vs. parental behavior that is controlling) was positively associated with academic benefits such as adjustment, persistence, and achievement. They took a person-centered approach, examining a group of students who experienced similar levels of autonomy support

(Ratelle et al., 2012). They noticed that autonomy support was related to academic decision-making and high levels of satisfaction (Ratelle et al., 2012). Implications of this research suggest that intervention programs aimed at improving academic achievement for students should work with their families to provide choices and opportunities for academic decision-making. In addition, parents should be provided opportunities to understand how to support their student's development autonomy and relationships (Ratelle et al., 2012).

Parent and youth connections that promote transition to college are supported through community organizations that employ strategies to connect youth and their parents to a variety of leadership roles enabling them to contribute their skills and talents (Slaton, Cecil, Lambert, King, & Pearson, 2012). In this stage of young adulthood, parents continue as coaches and supporters for self-determination in postsecondary settings and are key supports as students move into the community and daily living.

Building Families' Knowledge and Connectedness

Fostering Social Capital of Families

Social capital includes the series of networks that youth and their families have with special educators, counselors, school personnel, and community resource providers. Through these networks, families gather transition knowledge that enables them to utilize resources to benefit youth in their future education and work goals. Expanding social capital has been noted by a number of researchers as essential to guaranteeing access, opportunity, and success, especially for youth from CLD families, rural families, or families encountering isolation (Trainor, 2008). Aspects of social capital essential for transition include family advocacy to facilitate access to appropriate academic curriculum and family advocacy for transition services that meet the strengths, preferences, and interests of their youth (Trainor, 2008). Activities that enable families to expand social capital include participation in natural support network as trainers, mentors, peer advocates, community liaisons, or other natural supports (Kohler et al., 2016).

Social & Professional Connections

Youth self-determination for transition is enhanced through social connections in community activities such as sports (McGuire & McDonnell, 2008). Social affiliation and belonging contribute to success for many students with and without disabilities. Peer-led programs result in significant positive changes in terms of action and caregiver well-being (Doyle, 2015). For example, families of youth dealing with a chronic illness note that participation in a condition-specific support community enables the youth and other family

members to better negotiate living with their illness during the transition to adulthood (Doyle, 2015). Community-based wrap-around programs engage families, continually identify priorities, and have been found to be beneficial for youth with emotional and behavioral disabilities (Bruns et al., 2014). Community-based wrap-around is structured care that coordinates and prioritize the preferences and perspectives of the family and youth (Bruns et al., 2014).

Secondary. According to Peterson, Van Dycke, Roberson, & Sedaghat (2013), the primary roadblock to successful secondary transitions for youth with disabilities is a lack of knowledge of and understanding about postsecondary resources. Knowledge deficits include the eligibility criteria to access postsecondary supports and disability rights post-high school. Along with these rights come a myriad of responsibilities for which youth are often not prepared, including being the one to notify service providers about their disability and needed accommodations. The need to self-identify is one of the most challenging requirements in the transition from the world of entitlement to the world of eligibility (Peterson et al., 2013). Assisting individuals in this process requires enabling youth and families to take ownership of their legal rights and responsibilities.

In addition, technology links parents to their student's academic information, attendance, and course completion that assist families to continue to support their young adult to ensure on-time graduation (Weiss, Lopez, Rosenberg, Brosli & Lee, 2011). Technology-based communications such as email, text messaging, and social media enable families and program staff to connect digitally and enhance two-way communication, enabling it to occur more seamlessly (Mazza, 2012).

Trainor (2008) notes that teachers facilitate social capital during the transition by sharing employment and educational opportunities and community program information with youth and families. In addition to social relationships, Trainor (2008) defines social capital as the skills, competency, and network that influence the personal opportunities and success of family and youth. Social capital influences the level of acceptance, inclusion, and relational bonds within groups and builds bridges among diverse groups. Trainor (2008) noted that educators can limit social capital by not including connections to important people such as job coaches or guidance counselors who could facilitate students meeting their goals.

Postsecondary. Youth having the opportunity to explore postsecondary options with their families is critical to ensure a good match of their postsecondary goals to the best pathway such as postsecondary education (2 or 4-year) or credentials, career and technical education (CTE), and/or military (Mattis & Taymans, 2008). Youth and families need to learn how to systematically collect information that is related to youth's postsecondary goals (Martinez, 2009). For example, a family and youth with an intellectual disability expresses an interest in attending a college program, the first step is to explore college options, including cost of program, type of setting, transportation needs, support systems, and types of classes/work

experiences (Martinez & Queener, 2010). They will need information about supports for their youth such as community agencies and resources (Martinez & Queener, 2010). In addition, families and youth need to be aware that accessing supports and accommodations in the postsecondary environment requires disclosure of disability, including documentation of disability (Martinez & Queener, 2010).

In the current environment, a popular postsecondary pathway for students with disabilities is the community college setting. Community colleges are reporting a higher proportion of students with disabilities, in particular, students with autism (Eisner & Wazenberg, 2010; Pena & Kocur, 2013). This is partly due to the benefits offered at community college for students with disabilities who might need differentiated instruction and less than full-time enrollment and who plan to live at home and work while taking college classes (Eisner & Wazenberg, 2010). As colleges become more inclusive of diverse students, including students with disabilities, families can benefit from knowledge of evidence-based practices that support student success including encouraging their student to participate in peer-to-peer mentoring, faculty mentoring, and goal-setting workshops to better meet the demands of their academic program (Getzel, 2014).

Employment. Families can encourage their youth to develop job and employment based skill through career training programs in the community and career centers at postsecondary institutions. The National Technical Assistance Center on Transition has identified a number of evidence-based practices in the job preparation process. Those practices include job-specific employment skills; completing a job application; employment skills using community-based instruction; learning self-management for employment skills; and job-related social/communication skills (NTACT, 2010).

Community and independent living. Planning for independence ultimately involves the families and effective interagency collaboration to benefit youth (U.S. Department of Education, 2017). Families and youth need to be aware of how to work across systems designed to support employment. For example, families of youth who receive Social Security Income (SSI) and who are transitioning to work need to understand how their benefits are coordinated and how health care as well as SSI benefits are maintained while working (Social Security Administration, n.d.). A local Work Incentive Program (WIP) can provide support for families and youth with benefits planning.

In addition to connections to the workforce, families might need to reach out to social service systems. The rights of people with disabilities to be fully included in their communities requires that family members play and an important role alongside teachers, peers, health service providers, and volunteers in promoting community inclusion (Soresi, Nota, & Wehmeyer, 2011). Transitioning youth often receive adult services across multiple systems (e.g. health, education,

VR), and due to the lack of effective integration across those systems, barriers arise for families (Riesen, Schultz, Morgan, & Kupferman, 2014). Additionally, families experience barriers with insufficient health care coverage, difficulty navigating multiple systems, and lack of service providers in their communities (Koyanagi & Alfano, 2013; Zajac, Sheidow, & Davis, 2013).

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