EXPLORING BARRIERS AND STRATEGIES FOR FACILITATING WORK EXPERIENCE OPPORTUNITIES FOR INDIVIDUALS WITH INTELLECTUAL DISABILITIES ENROLLED IN POST-SECONDARY EDUCATION PROGRAMS

By

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To the Faculty of Washington State University:

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EXPLORING BARRIERS AND STRATEGIES FOR FACILITATING WORK EXPERIENCE OPPORTUNITIES FOR INDIVIDUALS WITH INTELLECTUAL DISABILITIES ENROLLED IN POST-SECONDARY EDUCATION PROGRAMS

Abstract

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There are a multitude of benefits associated with employment, which many individuals with intellectual disabilities (ID) are not afforded due to their struggles to find and maintain work. These poor employment outcomes are in part being addressed by the over 240 post-secondary education (PSE) programs for students with ID that exist on college and university campuses in the U.S., many of which include work experience as a program component. A sequential mixed methods study, featuring a quantitative survey and qualitative interviews, was conducted to explore challenges faced by PSE program staff when facilitating work experience engagements, as well as strategies utilized to encourage employers to provide work experience opportunities for students. In addition, the study included a component designed to explore the existence of potential relationships between certain PSE program characteristics and barriers faced when facilitating paid work experiences. Findings include the identification of common barriers to facilitating paid work experience for students in PSE programs as being: (a) transportation issues, (b) employer perceptions of the abilities of people with disabilities, (c) inadequate number of staff hours to support students in the workplace, and (d) finding time in the
student’s schedule. To increase paid work experience opportunities for students, PSE staff commonly use the following strategies: (a) solicit feedback from employer regarding the placement, (b) build a trusting relationship with the employer, (c) match student interests with their work experience position, (d) negotiate the scope of the job with employers so that it benefits both the business and student, (e) provide direct on-site training for the students in the workplace, (f) utilize natural supports in the workplace, and (g) provide students with an opportunity to relate what is learned in the workplace to what is learned in the instructional curriculum. The findings suggest that none of the program characteristics included in this study have a significant impact of the types of barriers faced by PSE staff when facilitating paid work experience. A discussion about these findings, including implications and recommendations for future research, has also been provided.
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Dedication

I would like to dedicate this dissertation to my wife, Keri McCarthy.
Without her encouragement, I would have never even started this degree.

Even in times of sheer craziness, she never waivered
in her belief that this was the right choice for me.

“You'll never regret more education…”
CHAPTER ONE
INTRODUCTION

While youth with disabilities are susceptible to a multitude of undesirable post-school outcomes, perhaps the most salient involves employment. Individuals with disabilities can be a valuable asset to the workforce, yet have been consistently under-employed when compared to those without disabilities.

Benefits of Work

Work is a basic human right that many feel is a part of their personal identity and may even be one of the main ways people define themselves. Grossi, Gilbride, and Mank (2014) describe work as “the cultural rite of passage through which one enters into adulthood” (p. 157). While many take for granted the opportunity to work the most basic of jobs, people with disabilities are often overlooked to make these meaningful contributions to society.

Wehman (2011) explained that work is especially important for people with disabilities because: (a) work is a *normal* part of what people do in society, (b) the right to work for people with disabilities is protected by laws, (c) it can promote economic well-being and opportunities for financial independence, (d) inclusive employment has the potential to provide upward job mobility, and (e) it can promote a positive self-image and increase self-dignity for vulnerable members of our communities.

The benefits of work were also described by Brown and Lent (2013) who detail five primary reasons why people are motivated to employed. The authors explain that people may work in order to: (a) a *fulfill needs* - work provides people with purpose and builds self-esteem and self-worth, (b) *build a public identity* - people can be labeled or subjected to stereotype by others based on their profession, (c) *develop self-identity* - how we see ourselves can be impacted
by our job, (d) meet societal expectations- work allows people to contribute to a society, which expects them to be employed, and (e) promote mental health- work keeps people occupied and generally provides structure for time.

While finding and maintaining employment has clear benefits, work may be of particular importance to individuals with intellectual disabilities (ID). Jahoda, Kemp, Riddell, and Banks (2007) reviewed relevant literature to explore the benefits of employment for individuals with ID. The authors found that when compared to individuals who are unemployed or work in a sheltered workshop, individuals with ID who are engaged in integrated employment have a higher level quality of life, including better self-esteem, psychological well-being, and locus of control. The authors found that while individuals with ID who work in an integrated setting may have a larger social network, there may still be limited depth to the friendships.

The known benefits of work for individuals with disabilities has helped shaped legislation designed to support employment opportunities for this population. The U.S. Department of Labor’s Workforce Innovation and Opportunity Act of 2014 (WIOA) was signed into law and contains provisions to help individuals with disabilities, including ID, find and maintain employment. Recognizing that early intervention is important to long-term employability, the law includes a provision requiring state Vocational Rehabilitation providers to allocate 15% of their total funds to focus on youth with disabilities who are transitioning from high school into the workforce. Additionally, the benefits of integrated employment, as opposed to segregated employment, are also reflected in WIOA’s provisions that funding must involve training for competitive work opportunities.
Under-Employment of Individuals with Disabilities

Especially when considering the multitude of benefits associated with paid employment, the low representation of individuals with disabilities in the workforce is concerning. Recognizing this problem for both individuals with disabilities as well as the larger society, there has been a call to provide increased opportunities to provide youth with disabilities the training necessary to find and maintain paid employment. Many individuals with disabilities want to work, but many are not afforded the opportunity. In their survey of adults with Down’s Syndrome, Kumin and Schoenbrodt (2015) asked respondents who were not employed to identify a reason for their unemployment. Over four times as many people identified themselves as looking for a job as being not interested in working.

The 2014 U.S. Department of Labor’s Bureau of Labors Statistics report (2015) indicates that while 64.6% of Americans without a disability are employed, the same is true for only 17.1% of individuals with disabilities. Especially concerning is that when compared to the rates from 2013, there was a slight decrease in employment of individuals with disabilities while those without disabilities were more likely to be employed.

Using the U.S. Census Bureau’s American Community Survey (ACS), Butterworth, Migliore, Sulewski, and Zalewska (2014) described employment statistics for individuals ages 22-30 years old, with and without a disability. While 75% of people without disabilities identified themselves as being employed, only 40% of individuals with disabilities said the same. Poor post-secondary outcomes are also represented by reviewing mean annual wages; people with disabilities make nearly $10,000 less annually than those without disabilities. Additionally, a discrepancy exists between the number of hours worked per week, with individuals without
disabilities working an average of 38 hours per week, compared to 34 for people with disabilities.

Newman et al. (2011) described findings from data collected in the National Longitudinal Transition Study-2 (NLTS-2), a large-scale research project funded by the U.S. Department of Education’s National Center for Special Education designed to explore post-school outcomes for youth with disabilities. Sixty percent of respondents (individuals with disabilities) identified themselves as being currently employed at the time of data collection, as compared to 66% of same-age peers without disabilities.

A survey sponsored by the Kessler Foundation and the National Origination on Disability (2010) completed a comparison study of ten indicators of significant life activities for respondents with and without disabilities in the United States. The results indicate that of working-age people polled, 59% of respondents without disabilities reported being employed compared to only 21% of respondents with disabilities. Of the ten indicators included on the survey, the discrepancy of employment status between those with and without disabilities was the largest between the two groups. This is especially concerning as the survey results also indicate that being employed has a positive impact on the level to which people with disabilities are satisfied with their lives (Kessler Foundation, National Organization on Disability, 2010).

Bleak projections about the future were described in a report from the Economic Picture of the Disability Community Project, a joint effort from several disability-related federal agencies (U.S. Department of Labor, 2015). The report indicates that individuals with disabilities are under-represented in 16 of the top 20 fastest-growing occupations, as identified by the U.S. Bureau of Labor Statistics. In addition, 17 of the top 20 fastest-declining occupations include an over-
representation of people with disabilities. These numbers are concerning for youth with disabilities preparing to enter the workforce.

**Under-employment of individuals with intellectual disabilities.** While post-school employment outcomes for youth with disabilities in general is concerning, the data for students with ID are even more unsettling. When compared to individuals who received special education services in other disability categories collectively, students with ID are less likely to be employed, enrolled in a post-secondary education program, and make more than minimum wage when employed (Grigal, Hart, & Migliore, 2011). When comparing rates of those who identified themselves as being *currently employed* at the time of data collection using the NLTS2, only those individuals who received special education services in the categories of orthopedic impairment, autism, and deaf-blindness were less-likely than people with ID to be employed (Newman et al., 2011).

The results of the aforementioned ACS, as presented by Butterworth et al. (2014), also describe bleak employment outcomes for individuals with ID when compared to people with disabilities in general. When comparing these groups, the data indicate that individuals with ID are less likely to be employed (32% compared to 40%), earn even lower annual wages (more than $3,000 difference annually), and work fewer hours (31 compared to 34 hours per week).

Kumin and Schoenbrodt (2015) surveyed 95 adults with Down’s Syndrome, or their caregivers, to better understand employment outcomes for this population. People with Down’s Syndrome also generally experience ID as a manifestation of the disability. While nearly 57% of respondents identified themselves as being engaged in paid employment, only 3% of participants worked 30 or more hours per week.
In order to better understand employment outcomes for individuals with ID, The Arc (2011) administered a survey of over 5,000 individuals who are members of the support network of a person with ID. Alarmingly, the results indicated that 85% of individuals with ID were not engaged in full- or part-time employment. Of those who were employed, 54% worked in a sheltered workshop rather than integrated employment (i.e., in work environments where most employees do not have a disability).

Often times the supports necessary for individuals with ID to be successful in the workplace are not available. The Arc (2011) indicated that 57% of families of individuals with ID who are unemployed report that the individual “is unable get the job training or other assistance they need to find and keep a job” (p. 5). Benito (2012) surveyed the families of students with ID as well as the professionals who support them in school to learn more about barriers to post-school opportunities. Fifty-nine percent of families and 41% of professionals who were surveyed indicated that the services the student received in high school were not sufficient to be successful in post-school goals.

As the persistence of low employment rates for adults with ID may suggest, youth are leaving school-based programs ill-prepared to find and maintain jobs (Newman et al., 2011). Barriers that individuals with ID may encounter when seeking employment include: (a) individual skill deficits (Lysaght, Ouellette-Kuntz, & Lin, 2012), (b) low levels of personal responsibility, accountability, motivation, and appropriate workplace behaviors (Petcu, Chezan, & Van Horn, 2015), (c) unavailability of transportation (Grigal & Dwyre, 2013), (d) lack of employment training (Dwyre & Deschamps, 2013), (e) employer concerns regarding workplace accommodations (Hernandez et al., 2008), (f) employer perceptions about the abilities of individuals with ID (Houtenville & Kalargyou, 2012), (g) concerns about safety in the
workplace (Lengnick-Hall, Gaunt, & Kulkarni, 2008), and (h) a general lack of employer
disability awareness (Kaye, Jans, & Jones, 2011).

In order to address these employment-related inequities and overcome these barriers,
school-based programs may provide career development activities (i.e., skills training, paid work
experience) to help better prepare youth with disabilities to be successful in the workplace
(Newman et al., 2011). Brown and Lent (2013) explain that career development “connotes a
continuous stream of career-related events” (p. 10). While many of these elements may be
naturally occurring, individuals who work with adolescents with disabilities have the opportunity
to orchestrate opportunities to augment employability. However, as the aforementioned
information suggests, many students with ID leave schools ill-equipped to find and maintain
employment. One strategy to increase employment opportunities involves student participation
in post-secondary education (PSE) programs for individuals with disabilities (Grigal et al.,
2015).

**Development of PSE Programs**

Post-secondary education (PSE) programs serving students with ID have existed since the
1970s (Neubert, Grigal, Moon, & Redd, 2001) and have significantly increased in numbers in
recent years (Weir, Grigal, Hart, & Boyle, 2013). Most of these programs do not grant higher
education degrees to program participants, but rather provide individualized special education
services to students with disabilities (Grigal, Hart, & Weir, 2012; Papay & Bambara, 2011;
Plotner & Marshall, 2014). Expected student outcomes are specific to the program and differ
from those of the general student population; PSE programs are not designed to serve as an
alternative way to gain matriculation for students who do not meet the general admittance
requirements for an institute of higher education (IHE) (Plotner & Marshall, 2014). PSE
programs serve students on a community college, college, or university campus, a more age-appropriate learning environment for students of this age (Kleinert, Jones, Sheppard-Jones, Harp, & Harrison, 2012; Papay & Bambara, 2011; Uditsky & Hughson 2012; Weir et al., 2013).

While PSE programs for students with ID provide opportunities for increased education and training for individuals, moral and philosophical reasons also exist for supporting such a program. Uditsky and Hughson (2012) argue that people with disabilities have the right to a normative pathway, or the same opportunities as those without disabilities, throughout their lifetime. Remaining in high school after graduation with peers is not a normative pathway, and students with disabilities should not be denied an opportunity to learn in a post-secondary setting due to a lack of academic ability. The expectation of college attendance has increasingly become a societal norm for adolescents completing high school in the United States. The number of recent high school completers enrolling in a post-secondary education educational setting has increased 17% between 1980 and 2012 (National Center for Educational Statistics, 2015). This increased perception of college attendance as the expected progression from high school may further alienate youth with disabilities, who are not always afforded the same opportunities as their peers.

**Work experience as a PSE program component.** A primary goal of many PSE programs involves career development and positive employment outcomes for students (Grigal, Hart, & Weir, 2012; Papay & Bambara, 2011). The 2013-2014 annual report detailing Transition Postsecondary Education Program for Students with Intellectual Disability (TPSID) programs provides encouraging details regarding successes (Grigal et al., 2015). Almost 40% of individuals enrolled in TPSID programs were involved in a paid work experience. Especially encouraging is that 48% of these students never previously had a paid job experience, which
shows the value of the programs because this type of engagement is widely-regarded as a predictor of post-school success for individuals with disabilities (Mazzotti et al., 2015; Test et al., 2009). However, perhaps the most notable employment statistic from the report is that 41% of students had a paying job upon exit from the program. These results are similar to those presented by Moore and Schelling (2015) who found that individuals completed a PSE program for students with ID were more likely to find employment and earn higher wages than those who did not.

Still, only 39% of students enrolled in PSE programs held a paid work experience position during the 2013-2014 academic year (Grigal et al., 2015). Even when considering that not all PSE programs have a goal of improving employment outcomes for students, this percentage is lower than might be expected.

As such, the purpose of this study was to explore the discrepancy between the well-documented value of paid work experience and the relatively low rate of PSE program enrollees who find and maintain employment. A survey of PSE program directors was administered in fall 2015 and follow-up interviews were conducted to gain more in-depth understanding of the phenomena. Research questions include:

1. What barriers exist to facilitating paid work experiences for individuals in PSE programs?
2. What strategies do PSE program personnel use to facilitate paid work experiences?
3. To what extent, if any, are barriers facilitating paid work experience related to PSE program characteristics?
CHAPTER TWO
LITERATURE REVIEW

Intellectual Disabilities and Work

The term *intellectual disabilities* (ID) has been increasingly become the standard nomenclature for a condition formally referred to as *mental retardation*. This change in terminology has been reflected in many arenas, including the United States federal government. Rosa’s Law (S. 2781: Rosa’s Law, 2010) modified existing federal regulations to use the term intellectual disability in all prior and future legislation.

Noting the emergence of the new term of ID, Shalock, Luckasson, and Shogren (2007) explain that three primary elements of the definition have remained consistent over the past 50 years. These include: (a) deficits in intellectual functioning, (b) limitations in adaptive behavior, and (c) manifestations occurring at an early age and continuing throughout life without substantial changes. For the purpose of this study, the definition of intellectual disability used in the Higher Education Opportunity Act of 2008 (HEOA) will be used. This describes a student with ID as one:

(A) With a cognitive impairment, characterized by significant limitations in—

(i) intellectual and cognitive functioning; and

(ii) adaptive behavior as expressed in conceptual, social, and practical adaptive skills; and

(B) Who is currently, or was formerly, eligible for a free appropriate public education under the Individuals with Disabilities Education Act.
Although prevalence varies by age, approximately 1% of the population has ID at varying levels of severity including: *mild, moderate, severe or profound* (American Psychiatric Association, 2013).

Lysaght, Ouelette-Kuntz, and Lin (2012) explored four prominent philosophical views of disability and explained how these might be interpreted in regards to ID and employment, including the: (a) biomedical model, (b) social model, (c) economic model, and (d) philanthropic model. The traditional *biomedical model* frames ID as an impairment that had been viewed a barrier to employment that one could not overcome. Today, technology and strategies to encourage an increased work output have altered the traditional view that those with ID were simply patients rather than contributing members of society. The *social model* describes disability as a human condition and frames deficits as society’s inability to accommodate those who are of differing abilities. Champions of this perspective would advocate for the removal of structural and attitudinal workplace barriers as well as discriminatory hiring practices that limit opportunities some members of society. The *economic model* focuses on the bottom-line for a business and frames decisions regarding the employability of individuals with ID in this context. While society’s financial burden of supporting individuals with ID can be alleviated by providing employment opportunities, it should not occur on the shoulders of employers expected to employ people when it does not make good business sense. Those who subscribe to the *philanthropic model* believe that the care for and support of individuals with ID is the responsibility of society. Employment should not be an expectation, but rather a means to enrich the lives of those with ID.

Recognizing that employers may subscribe to one or more of these philosophies regarding the abilities of individuals with ID is especially important in the context of
employment. Understanding these models helps provide a deeper understanding of the challenges faced by individuals with ID seeking employment. When those who support employment opportunities for workers with ID are aware of these varying philosophies, they may be better able to recognize and interpret underlying factors regarding decisions and motives of employers.

As discussed in Chapter 1, individuals with ID have poor post-school outcomes when compared to people without disabilities. Student involvement with a post-secondary education (PSE) program has the potential to increase an individual’s employability.

**Post-Secondary Education Programs for Students with ID**

**Historical perspective.** PSE programs for individuals with disabilities can be traced back to the 1970s. Bilovsky and Matson (1974) confirmed the existence of such programs through a survey of community colleges offering two-year degrees. These early programs were developed in response to a federal call to promote the *normalization principle* through service delivery for individuals with ID utilizing pre-existing resources. Bilovsky and Matson (1974) found four discrete program types designed to serve individuals with ID. These include programs that focus on: (a) *basic education*- improving academic skills, (b) *personal and social development*- increasing one’s ability to perform basic life skills, (c) *general employment skills and specific occupational training*- providing job training or opportunities to work in a sheltered workshop, and (d) *recreation*- using leisure activity to increase opportunities for social interaction. The authors described other programs at community colleges designed first and foremost to provide field experiences for students seeking certificates to work with individuals with disabilities. The authors made a case for inclusion of individuals with ID, many of whom had been recently de-institutionalized, and noted, “If the community fails to make provision for these ‘re-patriated’
patients, their rehabilitation will be hampered and it may be that the community will provide to be ‘not equal to or better than’ the hospital which they left” (p. 18).

Jones and Moe (1980) surveyed community colleges in the state of Washington to better understand the extent to which individuals with ID were being served. The authors described most programs as having been developed due to the efforts of employees of sheltered workshops or developmental disability agencies to promote additional training for individuals with disabilities. Developing arrangements with these professionals were preferable for college administrators, who felt that it was necessary to include a connection with those who already had experience working with individuals with ID. Most classes were specifically designed for, and taught solely to students with ID at locations not on the college campus (e.g., sheltered workshop, group homes). Instruction for students was based on curricula from special education or rehabilitation programs and included offerings such as “adult basic education, survival skills, prevocational skills, occupational programs, human awareness and parenting courses, and others” (p. 61).

Neubert, Grigal, Moon, & Redd (2001) reviewed literature regarding PSE programs from the 1970s and 1980s and described these embryonic programs as being developed and promoted by parents and staffed by volunteers. While programs were housed on college campuses, they remained virtually segregated from the general student body. The limited opportunities for inclusive activities generally involved interaction with peer volunteers and physical education courses, which were sometimes also segregated. Curricula featured non-credit courses focused on developing functional and employment-related skills designed for the students in the PSE programs.
Neubert et al. (2001) described a paradigm shift in the 1990s leading to more higher education opportunities for individuals with ID. The authors attribute this shift to: (a) a desire of parents and students to extend the enhanced culture of inclusive educational opportunities experienced in secondary schools, (b) the recognition of the possibility of post-secondary education as a post-school outcome due to the transition planning included in IDEA (1990) and the IDEA reauthorization 1997, and (c) family and school recognition of the need for more training due to the increased pervasiveness of alternative graduation certificates for individuals with ID rather than high school diplomas.

More recently, the PSE landscape has been most notably been shaped by the passage of the Higher Education Opportunity Act of 2008 (HEOA). This legislation, a re-authorization of the Higher Education Act of 1965, acknowledges the benefits of post-secondary education for individuals with ID and contains provisions to increase opportunities for this population. The legislation contains two primary initiatives designed to increase enrollment for individuals with ID: the creation of Comprehensive Transition Programs (CTP) and the development of federally-funded model demonstration PSE programs known as Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID).

The purpose of developing federally-recognized CTPs is to increase access to opportunities for individuals with ID. CTP program accreditation is offered through the U.S. Department of Education’s Federal Student Aid office and requires schools to provide information describing program components (e.g., duration, program structure, delivery of instruction, certificates awarded; Ochoa, 2011). Traditionally, an individual with ID has not had access to federal student aid when seeking post-secondary educational opportunities. This is most likely the case for two reasons; the individual may have not received a regular high school
diploma and enrollment criteria for an accredited degree program may not have been met. While students enrolled in a CTP are not eligible for federal student loans, they may be offered other traditional federal need-based student aid opportunities (e.g., Pell Grants, Supplemental Education Opportunity Grants, and federal work-study programs; Lee & Will, 2010). While these supports have the potential to increase post-secondary education opportunities for individuals with ID, a PSE program must be a federally-recognized CTP to offer these supports. While there are over 240 PSE programs in the United States (Think College, n.d.), only 39 were CTPs as of July 1, 2015 (U.S. Department of Education, 2015).

Another main provision of HEOA is the development of model TPSIDs, as well as the development of a national coordination center for PSE programs (Lee & Will, 2010). The US Congress allocated $10.6 million to develop model 27 TPSIDs for a five-year period, which were “tasked with creating, expanding, or enhancing high-quality, inclusive higher education experiences to support positive outcomes for individuals with ID” (Grigal et al., 2015, p. 1). The 2013-2014 (Year Four) TPSID report indicates that 883 students attended programs operating under this federal initiative (Grigal et al., 2015). Think College serves as the national coordinating center and is tasked with evaluating the effectiveness of TPSIDs and disseminating information regarding best practices (Think College, n.d.)

**PSE program structures.** A database listing PSE opportunities for students with ID in the US includes 243 unique programs (Think College, n.d.). Unlike most programs at the post-secondary level, the majority of students in PSE programs for students with ID are not enrolled in degree-granting programs. In fact, Grigal, Hart, & Weir, (2012) found that 50% of programs allow students access to general university courses, and only half of these programs have students who take advantage of this opportunity. Papay and Bambara (2011) found similar
results, noting that 24% of students in PSE programs for students with ID were enrolled in general university courses and none of these students were matriculated in a degree program.

Hart, Mele-McCarthy, Pasternack, Zimbrich, and Parker (2004) reviewed the programmatic structures of existing PSE options and developed three broad categories to classify such programs. *Substantially separate programs* exist in a post-secondary setting and include limited or no interaction with the general student population. Such programs exist to provide age-appropriate instruction for students 18 through 21 years-old that focuses on curricular elements that may not work as well with the format of a traditional high school (e.g. community-based instruction, job training). *Mixed model programs* provide specialized instructions for the students with ID, yet also include an element of participants learning alongside their peers without disabilities. Such programs also often include social opportunities for participants as well as the potential to find on-campus employment. Lastly, PSE programs that follow the *inclusive individualized services* model are designed to be well-aligned with the individualized nature of special education services. Inclusive program models have been on the increase in frequency (Neubert & Moon, 2006). Rather than providing prescribed group instruction for individuals enrolled in PSE programs using this inclusive model, programs of study are individualized to accommodate the unique needs, skills, and interests of the student.

In addition to these three models, Hart, Grigal, and Weir (2010) outlined three main program structures designed to provide nontraditional post-secondary education options for individuals with ID, including: dual or concurrent enrollment, college-initiated, and individual- or family-initiated. *Dual or concurrent enrollment* programs are designed to serve individuals who are still eligible for school-based services. These programs are generally initiated by the school, utilize funding through IDEA, and may include full-or partial-day post-secondary
experiences for students. Other programs are *college-initiated*, which may be supported by community and state support agencies in addition to the institution of higher education (IHE).

Students generally pay tuition, which removes limitations (e.g., age) that IDEA-funded programs must adhere to. The authors explain that students who seek *individual- or family-initiated* enrollment often go unreported. This generally involves a small support network navigating university policy to find or manufacture opportunities in order to allow an individual with ID to participate in a post-secondary education experience.

While the literature does note a high variance of program design (Grigal et al., 2012; Neubert & Moon, 2006; Papay & Bambara, 2011), Grigal et al. (2012) explain that the passage of the Higher Education Opportunity Act (HEOA, 2008) has provided guidance for the structuring of PSE programs for students with disabilities. The authors note the importance of the legislation by explaining it was the first to provide guidance for the development and structure of PSE programs for students with ID. Although HEOA provides institutions with flexibility of program design, it does include language detailing a preference for programs that implement inclusive service models. In order to meet the requirements outlined in the legislation, programs must: (a) be offered by an institute of higher education, (b) provide academic, vocational, and independent living instruction to help participants become more employable, (c) include an advising component, and (d) include at least half-time instruction with typical peers in credit or non-credit bearing courses, internships, or training (HEOA, 2008).

In order to provide guidance to PSE programs that follow a wide variance of structure and design, Grigal, Hart, and Weir (2011) developed the Think College Standards, Quality Indicators, and Benchmarks for Inclusive Higher Education. The standards were designed to “create, expand, or enhance high quality, inclusive postsecondary education to support positive
outcomes for individuals with intellectual disabilities” (p. 1). Developing a set of standards has allowed programs with great differences in design and structure to include common features that are viewed as best practices for PSE programs. The broad standards (each of which contain detailed quality indicators) include: (1) academic access, (2) career development, (3) campus membership, (4) self-determination, (5) alignment with college systems and practices, (6) coordination and collaboration, (7) sustainability, and (8) ongoing evaluation.

**PSE program goals and foci.** The Higher Education Opportunity Act (2008) defines a comprehensive transition program (CTP) as one that is “designed to support students with intellectual disabilities who are seeking to continue academic, career and technical, and independent living instruction at an institution of higher education in order to prepare for gainful employment” (Sec.760). While this provides guidance for PSE programs seeking the benefits offered by the HEOA, differences in program goals and foci exist for PSE programs in general.

Grigal et al. (2012) surveyed PSE programs for students with ID (N=149) and found that common primary program foci included: independent living skill development (32% of programs), vocational skill development (32% of programs), and academic course access (18% of programs). Papay and Bambara (2011) sought similar information by asking PSE program coordinators to identify the primary purpose for students attending school on a college campus. Of the 52 respondents, nearly all program coordinators (90%) identified the development of employment or vocational skills as a reason for students to be on campus. Additional reasons included the opportunity to engage with same-age peers as well as independent living skill development, both of which were identified by nearly 75% of respondents. Mock and Love (2012) surveyed stakeholders (N=246) at a statewide meeting focused on post-secondary education opportunities for individuals with disabilities. In their descriptions of themes and
concepts provided by stakeholders, employment-related comments were prominent in feedback provided by students, parents, community-based and state agency personnel, as well as representatives from school districts.

**PSE as a means to develop employment skills.** The findings from the aforementioned studies, along with the definition of CTP included in HEOA (2008), suggest that the development of employment skills for students with ID is a primary focus and key component of many PSE programs. The importance of including employment training as part of a PSE program for individuals with ID is further strengthened by Benito (2012) who surveyed professionals who support individuals with ID (n=353) as well as family members (n=553). Results indicate that 70% of families of students with ID and 81% of professionals who work with youth with ID describe positive post-school employment outcomes as *very important*. Martinez, Conroy, and Cerreto (2012) surveyed parents of youth with disabilities (N=61) and found that approximately half of respondents noted a preference for PSE programs that have a primary focus of positive employment-related outcomes for students. This value of employment training is further represented by the inclusion of *career development* as the second Think College PSE Program Standard (Grigal, et al., 2011).

Griffin, McMillian, and Hodapp (2010) explored parent attitudes regarding PSE program structure and came to the conclusion that “PSE programs should prioritize preparation for employment as the primary outcome for their students” (p. 345). The high frequency at which PSE programs identify improving employment outcomes for youth with disabilities as a primary goal led Papay and Babara (2011) to consider that “we could perhaps refer more accurately to programs based on college campuses as employment programs based in age-appropriate settings rather than as postsecondary education programs” (p. 90).
**PSE program successes relating to employment.** As the emergence of PSE programs as a training option for youth with ID is a relatively recent phenomenon, research describing these outcomes is somewhat scarce. However, there are a handful of studies that have sought to better understand the impact of PSE program completion on employment outcomes for individuals with ID.

Zafft, Hart, and Zimbrich (2004) surveyed two cohorts of students with low-incidence disabilities ($N=40$) to better understand the impact of a PSE program. When compared to students who did not receive instruction through a PSE program for students with ID, those who were enrolled in the PSE program: (a) were more successful with competitive employment (non-sheltered workplace) and less likely to require a job coach in the workplace, (b) worked fewer paid hours per week, (c) utilized more accommodations, and (d) were more likely to receive a high school diploma (although the authors noted that this is no longer the case due to a change in graduation requirements).

Hughson, Moodie, and Uditsky (2006) collected data to explore the effectiveness of six IHEs that offer PSE programs for individuals with disabilities in Alberta, Canada. The authors found that 72% of individuals who completed the program were engaged in either full- or part-time employment, many of whom were supported by natural or informal supports in the workplace. A majority of students and families of students who completed the program reported that their experience in the program “significantly improved their options and life choice with regarding to work, career planning, community involvement, and living arrangements” (p. 105). Grigal and Dwyre (2010) surveyed students who completed PSE programs in Connecticut and Maryland ($N=96$) and found positive post-program employment outcomes. Eighty-three percent
and 72% of program graduates, respectively, found paid employment opportunities upon graduation.

Ross, Marcell, William, and Carlson (2013) surveyed graduates of a PSE program (N=125) to explore post-program outcomes in multiple domains. Results indicate that students who completed the program had better employment and independent living outcomes than those with ID in the general population. In fact, 84% of program graduates reported themselves as being employed for pay, with 73% earning at or above minimum wage. Especially encouraging is the finding that 88% of program graduates managed their own finances and supported themselves with wages or support systems identified through the PSE program.

Encouraging information regarding the success of students exiting model PSE programs was described in the 2013-2014 TPSID report (Grigal et al., 2015). The percentage of students who found paid employment directly after completing the PSE program increased from 21% in 2011 to 41% in 2014. Moore and Schelling (2015) compared employment outcomes between students who graduated from a PSE program and a comparison group, a representation from the National Longitudinal Transition Study-2. The researchers found that students who completed a PSE program had higher rates of employment.

Paid Work Experience

Benefits of paid work experience. The literature contains a substantial number of studies suggesting that paid work experience for youth with disabilities has a significant impact on post-school employment success. Work experience has been operationally defined as: “any activity that places the student in an authentic workplace and could include work sampling, job shadowing, internships, apprenticeships, and paid employment” (Rowe et al., 2015). In order to promote post-school sustained employment, it has been recommended that work experiences be
 included as a key component of school services for youth who receive special education services in high school (Nicholas, Luecking, & Luecking, 2006; Rusch, Hughes, Agran, Martin, & Johnson, 2009). Additionally, in a publication designed to identify and describe national standards and quality indicators for students in transition, the National Alliance for Secondary Education and Transition (2005) included *Career Preparatory Experiences* as one of five essential components of programs for students with disabilities.

To identify predictors for post-school employment success for students with disabilities, Test et al. (2009) conducted a comprehensive review of relevant literature. Involvement with paid work experience was one of the 16 predictors identified as an evidence-based predictor of success. This positive correlation between involvement with paid work experience and post-school employment success was confirmed by Haber et al. (2015), who conducted a meta-analysis of relevant literature. Mazzotti et al. (2015) expanded and updated the work of Test et al. (2009) and again found involvement in paid work experience as predictor of employment success for youth with disabilities. In a meta-analysis of literature designed to identify non-academic behaviors associated with post-school success for youth with disabilities, McConnell et al. (2012) also found involvement with paid work to be practice that may lead to post-school employment. Providing paid work experience may be especially beneficial to students with severe disabilities, as the practice is strongly correlated with successful post-school work engagement for students who receive special education services under the combined categories of ID, autism spectrum disorder, and multiple disabilities (Carter, Austin, & Trainor, 2012).

In order to identify practices that were valuable components of job training, Lindstrom, Doren, and Meisch (2011) interviewed eight individuals with disabilities who had been successful finding and maintaining employment seven to ten years after exiting school services.
Interviewees discussed the benefits of having improved both soft skills as well as job-specific skills through their paid work experiences in high school. Flexer et al. (2011) also utilized post-school outcome data \((N=1,540)\) to explore the extent to which inclusive education, career and technical education, and work study involvement in high school impacted employment. The researchers found that all three factors were positive predictors of success. In regard to work study, the authors speculate that this experience while in high school may develop and promote an individual’s view of paid employment as an expectation, rather than an option.

Shandra and Hogan (2007) found that school-based job training programs have the potential to increase the likelihood that students with disabilities will be stably employed and working full-time. In addition, their research indicates that work-based training programs increase the participants’ ability to find a job that includes fringe benefits. Similarly, through studying the Vocational Education Program, designed for high school students with disabilities, Ofoegbu and Azarmsa (2010) found a significant relationship between program participation and post-school career success. Additionally, Lewis, Thorensen, and Cocks (2011) reviewed apprenticeship programs for students with disabilities in Australia and found favorable outcomes for graduates when they compared wage rates, hours-per-week worked, and job retention to those students who either did not complete or enroll in a similar type of program.

Furthermore, Joshi, Bouck, and Maeda (2012) reviewed data provided by the NLTS-2 and found that student involvement in work-related transition activities while in high school had a positive correlation with post-school employment success. One employer of a person with a disability explained that participation in a work experience program resulted in “increased independence, self-care skills, and heightened self-esteem” (Luecking, 2004, p. 9).
Barriers to Paid Work Experiences in PSE Programs

While engagement in paid work experience is a predictor of positive post-school outcomes for individuals with disabilities, employment specialists may struggle finding opportunities for their students. Factors relating to the PSE programs, the students themselves, and employers are explored below.

Barriers related to PSE program structure. The literature includes the identification of barriers that may be specific to PSE programs working to provide paid work experience to students. Perhaps most notable is the lack of training and knowledge in employment supports of PSE staff. The 2013-2014 TPSID report (Grigal et al., 2015) describes many PSE staff as having limited knowledge about best practices involving customized and integrated employment. Additionally, PSE program staff have described needing to manage limited financial resources to support students engaged with work experiences (Petcu, Chezan, & Van Horn, 2015). Grigal and Dwyre (2010) identified barriers involving the resource of time; some PSE programs have difficulty managing time for work experience due to the academic expectations for students.

Barriers related to inter-agency collaboration. Another barrier to facilitating paid employment for students in PSE programs involves inter-agency collaboration, mostly notably with vocational rehabilitation (VR). While partnerships between PSE programs and VR can be fruitful and provide additional opportunities for students (Sheppard-Jones, Reilly, & Jones, 2013), there can be challenges with the relationship. PSE program coordinators (n=66) surveyed by Petcu et al. (2015) identified barriers such as: (a) a large investment of time to develop relationships with VR personnel, (b) lack of clarity and guidance regarding state VR regulations for students who are enrolled in a PSE program, (c) an inefficient system for VR referrals, (d)
lack of interest from VR personnel to collaborate with PSE staff, and (e) issues involving the VR payment system.

**Barriers related to student factors.** In addition to barriers to work experience involving PSE program staff, challenges have been identified relating to the student themselves. For example, Lysaght et al. (2010) explained that individuals with a disability may face workplace challenges, including “slower than average learning of new tasks, impaired memory, slow and sometimes impaired motor performance, and reluctance to change roles and routines” (p. 412). Petcu et al. (2015) identified additional barriers that directly involve the student as being related to “skill level, motivation, responsibility and accountability, difficulty in identifying realistic employment goals, problem behavior, and attendance to work” (p. 20). Although it is perhaps not a barrier directly related to the student, issues involving transportation to and from the job site have been identified as a challenge when facilitating work experiences for students enrolled in PSE programs (Grigal & Dwyre, 2013; Petcu et al., 2015).

In addition to barriers that involve the students directly, many students arrive to PSE programs unprepared to maintain a paid employment position. This unpreparedness is perhaps due to a lack of training and awareness of employment-related best practices at the high school level (Dwyre & Deschamps, 2013; Grigal & Hart, 2010). As such, some students enter PSE programs with insufficient work skills and arrive with limited information regarding interests and ability. The 2013-2014 TPSID report (Grigal et al., 2015) noted these specific areas (poor student preparation and assessment of skills) as challenges noted by program coordinators facilitating work experience in these programs.

**Barriers related to employers.** Some barriers to facilitating work experiences for students with ID may involve challenges associated with the businesses themselves. Grigal and Dwyre
(2010) found that the ability to connect students with paid work experience can be impacted by changes in management within a business. Additionally, the authors explained that some work opportunities may be impacted by seasonal lay-offs, which impact the extent to which students receive consistency in their work. Petcu et al. (2015) described a paucity of paid work experience availability as well as a limited number of hours for many students who do find positions.

**Employer perceptions.** As employers are the ultimate gatekeepers of employment, it is necessary to understand what kinds of challenges may be associated with their perceptions. A common concern involves providing workplace accommodations (Domzal, Houtenville, & Sharma, 2008; Hernandez et al., 2008; Houtenville & Kalargyou, 2012; Jasper & Waldhard, 2012; Kaye, Jans, & Jones, 2011; Lengnick-Hall, Gaunt, & Kulkarni, 2008; Lindsay, Robinson, McDougall, Sanford, & Adams, 2012). Jasper and Waldhard (2012) explained that concerns relating “to workplace accommodations mandated by the Americans with Disabilities Act were seen as some of the greatest challenges” (p. 119). Most of the accommodation-related concerns identified by employers involved the expenses relating to providing such accommodations.

Employers also identified concerns related perceived low productivity and the inability of an employee with a disability to complete requisite job tasks (Domzal et al., 2008; Hernandez et al., 2008; Houtenville & Kalargyou, 2012; Lengnick-Hall et al., 2008; Lindsay et al., 2012; Kaye et al., 2011). Domzal et al., 2008 explained that this is especially true in more physically-demanding positions. Many employers interviewed by Kaye et al. (2011) admitted that workplaces do discriminate against job candidates with disabilities because of an assumption that they will not be able to complete job tasks.

Two studies (Lengnick-Hall et al., 2008; Morgan & Alexander, 2005) identified concerns related to the safety of the employee with a disability as well as their co-workers. Concerns
related to safety may be related to a belief that supervisors may need to spend more time monitoring employees, a concern identified by Hernandez et al. (2008). Houtenville and Kalargy (2012) also identified similar concerns, explaining that supervisors can become uncomfortable with, and unsure how to discipline employees with disabilities. Legal concerns, such those involving discipline, were identified as a concern by Lengnick-Hall et al. (2008). Hernandez et al. (2008) also identified legal concerns, but more specifically related to the interview and hiring process.

Other employer concerns included a lack of disability awareness (Kaye et al., 2011) and a high rate of absenteeism (Hernandez et al., 2008). Lengnick-Hall et al. (2008) also found additional concerns regarding increased health care expenses, damaging effects on co-worker morale, and a negative impact on customers.

In order to explore how concerns have changed, Erickson, von Schrader, Bruyere, and VanLooy (2014) compared employer survey results to responses from 12 years prior. The researchers found that the cost of accommodations has remained a concern for employers. However, the authors were encouraged to find decreased concern regarding: (a) general attitudes and stereotypes, (b) supervisor knowledge related to accommodations, (c) training costs, and (d) supervision.

**Strategies to Promote Work Experiences.**

While significant challenges do exist, the literature contains information describing strategies implemented by PSE program employment specialists. In order to promote work experience opportunities for students enrolled in PSE programs, Grigal and Dwyer (2010) recommend that program staff: (a) identify paid employment as a goal of the program, (b) dedicate sufficient time and staffing for both job development and student placement, (c) provide
training in job development practices for staff who facilitate work experiences, (d) allow for flexibility with the schedules of students and staff, and (e) engage in career discovery practices to identify unique strengths and interests of the individual students. These recommended practices are well-aligned with recommended practices identified in the Think College PSE Program Standards (Grigal, Hart, & Weir, 2011). Hart, Grigal, and Weir (2010) recommend that academic coursework for students in PSE programs have a relationship to the work experiences in which they are engaged. This alignment will benefit the student in both the academic and vocational settings.

As PSE programs often involve coordination with other agencies and organizations, developing effective partnerships can have a positive impact on the extent to which students have opportunities for work experiences. Sheppard-Jones et al. (2013) emphasize the importance of program staff working with VR personnel to support placements. In addition to supporting the students when they are seeking positions, the authors recommend that PSE program staff support students at the job site. This support may involve direct training, observation, evaluations, and other supports negotiated with the employer. Indirect student support strategies may include: (a) meeting with employers to negotiate the scope and environment of the job, (b) identifying natural supports, including co-workers who may serve as on-site mentors, (c) training co-workers to effectively and efficiently work with the student, (d) making regular contact with the manager and workplace mentor, and (e) providing ongoing support to managers and co-workers as needed. Hart, Grigal and Hart (2010) also discussed the importance of relationship building for PSE staff. They recommend utilizing existing employer and business networks to increase opportunities for students.
Employer perceptions regarding strategies to increase opportunities for workers with disabilities. In order to encourage increased opportunities for workers with disabilities, several studies included components designed to explore practices viewed by employers as helpful to promote inclusive workplaces.

The utilization of support networks for employers of people with disabilities, such as vocational rehabilitation, may have an impact on employer perceptions. Hernandez et al. (2000) found that employers who utilized such supports had positive experiences, however few businesses utilized these resources (Jasper & Waldhart, 2012). This is further supported by Hernandez et al. (2008) who found that employers generally had positive experiences when working with such agencies. However, there was criticism that support was sometimes lacking after the individual was hired and employers expressed a desire for continued communication.

Dozmal et al. (2008) asked employers who self-identified as not actively recruiting employees with disabilities about the types of information that would encourage them to begin this practice. The employers identified the most valuable types of information as that involving performance and productivity of people with disabilities and how this can positively impact their bottom line. Respondents identified information regarding the cost of recruitment as being the least persuasive from the list of potential factors.

Employers surveyed by Houtenville and Kalargy (2012) felt that businesses would be more open to providing employment opportunities to people with disabilities if they: (a) received tax benefits, (b) were more able to provide flexibility with the work schedule, and (c) had access to disability-related training. Employers who responded to the survey administered by Kaye et al. (2011) generally explained that more workers with disabilities would be hired and retained if the employers: (a) received better or more training, (b) had access to an expert resource on providing
accommodations, (c) were provided with written information for addressing disability-related concerns, and (d) had knowledge about specific procedures for managing requests for accommodations.
CHAPTER THREE

METHODS

The general purpose of this study was to explore the discrepancy between the well-documented value of paid work experience and the relatively low rate of PSE program enrollees who find and maintain employment. A survey of PSE program directors was administered in fall 2015 and follow-up interviews were conducted to gain more in-depth understanding of the phenomenon. Research questions include:

1. What barriers exist to facilitating paid work experiences for individuals in PSE programs?
2. What strategies do PSE program personnel use to facilitate paid work experiences?
3. To what extent, if any, are barriers facilitating paid work experience related to PSE program characteristics?

Methods

In order to explore the research questions, both qualitative and quantitative methods were used in this mixed methods study. A questionnaire was administered, followed by interviews containing questions designed to further explore the findings identified using the survey instrument.

Research Design

Mixed methods. In order to explore the research questions, a sequential mixed methods (MM) research design was used (Teddle & Tashakkori, 2009). Figure 1 provides a visual representation of the research design for this study. MM research involves both qualitative and quantitative research elements followed by a meta-inference process to integrate the results of both research components, examining the main research questions in a holistic manner. This
particular study can be described as a *sequential mixed design* as it involves a quantitative component (survey) followed by a qualitative component (interviews), which Teddlie and Tashakkori (2009) describe as “a classic MM combination” (p. 35). The survey phase of the study served to direct, inform, and potentially impact the research questions as the study moved to the interview component. The final meta-inference was developed using information from both phases of the study.

Rather than relying on only qualitative or quantitative methods, the MM research design provides three primary benefits, as described by Teddlie and Tashakkori (2009). The first of these benefits involves the types of research questions that are able to be explored with MM research. Some researchers feel that qualitative research is best used to answer *exploratory* questions, while quantitative research is best suited for *confirmatory* research questions. MM design allows for the researcher to simultaneously study both types of research questions, which is well-aligned with the nature of the research questions in this study.

The second benefit of MM research described by Teddlie and Tashakkori (2009) involves the ability to produce a stronger inference. The breadth of survey data in conjunction with the depth of interview data allow the researcher to make better inferences. In the current study, the interviews provided an opportunity to further explore the survey results providing additional depth to the quantitative findings. In addition to providing an opportunity for data triangulation, Teddlie and Tashakkori (2009) also note that multiple sources of data also makes for more interesting results.

The final benefit unique to MM research is the possibility for opposing, or divergent, findings. Teddlie and Tashakori (2009) explain that divergent findings can be valuable to researchers because they “lead to a reexamination of the conceptual frameworks and the
Figure 1: Research design. This diagram provides a visual representation of the mixed methods design used in this study. It is presented chronologically, starting at the top. The survey refers to quantitative methods, while the interview refers to qualitative methods. The meta-inferences are part of the mixed methods research results and discussion.
The final benefit unique to MM research is the possibility for opposing, or divergent, findings. Teddlie and Tashakori (2009) explain that divergent findings can be valuable to researchers because they “lead to a reexamination of the conceptual frameworks and the assumptions underlying each of the two components” (p. 35). Because MM research can embrace differing viewpoints and perspectives, studies resulting in divergent findings still fit within the framework.

**Quantitative methods.** Survey research design was used to collect quantitative data for this study. This method was chosen because it “provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population” (Creswell, 2014, p. 155). This study involved a single survey administered over a single period of time, which has been referred to as a cross-sectional survey (Creswell, 2014) or a one-shot design (Lodico, Spaulding, & Voegtle, 2010). The survey was developed on-line and delivered to potential participants through an email invitation with a hyperlink to the survey.

Lodico et al. (2010) describe the advantages of survey research as including: the possibility of collecting a large amount of data in a short period of time, increased likelihood of honest responses due to anonymity, and data that is simple to summarize. The authors also included disadvantages of the design, which include: extensive planning, limited opportunity to engaging in in-depth probing of responses, and the lack of depth of responses.

**Qualitative methods.** The qualitative component of the research involved interviews with individuals who completed the survey. Kvale and Brinkmann (2009) describe an interview as simply a “conversation with structure and purpose” (p. 3). Interviews provide opportunities for individuals to present life experiences and provide detail to support thoughts and ideas. In order to provide both structure and flexibility, the interviewer engaged in one-on-one semi-
structured interviews, utilizing a protocol that is designed to be flexible and not followed precisely (Kvale & Brinkmann, 2009).

Lodico et al. (2010) describe the advantages of using interviews as a research tool. The authors explain that such methods can: provide an opportunity to focus on a small and specific group, give researchers the option to adapt questioning in real time to allow for additional probing, and allow for the collection of large amounts of in-depth data to better understand the perspectives of individuals. The authors also describe the disadvantages of interview-based research as: providing a small sample size (typically), the need to allocate a large amount of time necessary to administer interviews, and featuring complex and time-consuming analysis of data.

Participants

This research explored the perspectives of personnel who work for a post-secondary education (PSE) program for individuals with intellectual disabilities (ID) in the United States. As such, these individuals represent the target population, defined by Dillman, Smythe, and Christian (2014) as “the group that the survey aimed to describe and generalize results to” (p. 57). Email addresses were collected from the Think College (n.d.) database of existing PSE programs in September 2015, representing the sampling frame (Dillman et al., 2014). There were, at the time, 243 programs listed in the database of PSE offerings in the United States. An email was sent to program directors, requesting that someone knowledgeable about the program’s career development offerings complete the hyperlinked electronic survey. While this may have been the directors themselves, some PSE programs employ staff who specifically manage career development activities for students in the program. As the recipient of the email invitation, program directors were tasked with deciding if they, or another staff member, were best suited to complete the survey. Using 243 as the closest estimate of population (in PSE
programs), a 30% response rate would provide 73 participants. According to (Cohen, 2013) a 30% response rate is appropriate.

As the post-survey interviews came from the same pool of participants, the survey was also used to recruit potential interviewees. Participants for the interview portion of the research came from the pool of individuals who completed the survey component of the study. Those who completed the survey were asked if they would be willing to be interviewed to collect more information to help more fully explore the research questions. Efforts were made to ensure interview participants representing diverse program character were selected from the pool of respondents who indicated that they would be willing to engage in dialogue.

Seidman (2006) describes two criteria that may be used to determine if a sufficient number of participants have been interviewed. The first criterion is sufficiency; researchers should evaluate their participants to ensure that they are an appropriate representation of the population being studied. The second criterion involves data saturation; when the researcher begins to hear the same information repeatedly, there may be a sufficient number of participants. While Seidman (2006) is hesitant to provide a recommended number of interviewees, Kvale and Brinkmann (2009) recommend researchers seek to include between five and 25 participants.

Instruments

Web-based survey. A web-based survey was administered to PSE staff who have knowledge of program components involving work experience opportunities for students in order to better understand their perspectives regarding the research questions. The development of this new survey instrument is described below, and the final survey can be found in Appendix A.
The first part of the survey was designed to collect descriptive information to describe pertinent characteristics of the respondent and their program. After completing questions about their role and number of years they have been affiliated with the PSE program, respondent were asked to provide information regarding the program with which they are involved. Participants were asked to include the name of their institution and were reminded that all information will remain confidential with results being presented only in aggregate form. Information to describe program characteristics reflected the components of the Organizational Domain described by McEathron, Beuhring, Maynard, and Mavis (2013) in their Taxonomy for Postsecondary Education Programs. The formatting of the questions were based on the survey tool developed by Grigal et al. (2012) used to collect PSE program characteristics in a nationwide survey. Most of these items designed to collect demographic information are written in nominal-close ended format; respondents were given choices that are not ranked by magnitude (Dillman et al., 2014).

The second section of the survey focused specifically on items related directly to work experiences for program participants. Program directors were asked to identify: (a) the extent to which specific sources provide employment support or services to program participants, (b) the setting and conditions in which students receive work experience, (c) the level to which specific items are barriers to finding paid work experience for students, (d) the extent to which specific strategies are used to procure paid work experiences for students, (e) perceptions regarding their relationship with vocational rehabilitation, and (f) their level of agreement relating to other elements regarding paid work experiences. With the exception of the component designed to measure the job setting and conditions, which is presented in the same manner as in Grigal et al. (2012), each of these survey elements was designed by the researcher and reflect findings presented by: Carter et al. (2009), Grigal et al. (2015), Grigal and Dwyre (2010), Grigal and Hart
(2010), Hughson, Moodie, and Uditsky (2006), Luecking (2010), and Petcu et al. (2015). While there were opportunities for participants to elaborate on responses using open-ended questions, the remainder of the items followed an ordinal close-ended format, meaning that responses align with a scale or continuum (Dillman et al., 2014).

Survey instrument evaluation and revision. The survey was developed following the three stages of testing described by Campanelli (2008). Campanelli recommends that survey designers begin with a Developmental Stage, which involves exploring existing literature on the topic and considering potential issues or concerns that may be encountered by respondents. All of the elements of the survey tool were designed to directly reflect to information provided in the literature review of this paper.

Campanelli (2008) then recommends that survey-designers move to a second phase, Question Testing, which is sometimes referred to as a Pretest. The primary purpose of this phase of survey development is to “ensure that each individual question meets all the principles of good questionnaire design” (p. 177). The survey tool was developed by the researcher and reviewed by three experts. Individuals with expertise in one of the following areas were recruited: special education, survey design, and post-secondary education for individuals with intellectual disabilities.

The third stage described by Campanelli (2008), the Dress Rehearsal, involves evaluating the survey tool as a whole. While this often is accomplished by conducting a pilot study, Campanelli explains that this stage can involve a re-evaluation of the edited questions and survey instrument as a whole. For this research, a pilot study was not conducted due to the relative small population of potential participants. Instead, the dress rehearsal phase involved review of the survey tool by another expert in survey design as well as an additional expert in
post-secondary education for individuals with disabilities. As per the recommendations provided by Campanelli (2008), reviewers were asked to focus on evaluating the smoothness and flow of the questionnaire. The reviewers were given access to the web-based survey, which included opportunities on each page for the reviewer to include written comments. These written comments were reviewed and considered for the final version of the survey instrument.

**Measures to increase validity of the survey instrument.** Construct validity refers to the extent to which survey items measure what they intend to measure (Dillman et al., 2014). Measures have been taken to ensure that survey items have been written in a way to increase the likelihood that participants will respond appropriately.

Dillman et al. (2014) provide guidelines for general survey item development that are applicable to all types of questions. Consideration was given to the format of each question and how respondents will be given the most appropriate means of providing information. Questions were designed to eliminate two- or three-part items so that only one piece of information is being requested at a time. While overly technical language was avoided, some items that will be understood by PSE personnel may not be clear to those who are unfamiliar with such programs. Uncomplicated wording, short direct phrasing, and simple sentences were chosen to help increase the ease at which respondents can complete the survey.

As most of the items in the survey follow an *ordinal close-ended* question format, the guidelines presented by Dillman et al. (2014) were implemented in the design. Considerations were given as to the appropriateness of two response scale formats. *Unipolar scales*, which measure one dimension with a zero point on one end, and *bipolar scales*, which measure in two opposite directions, formats, have been included in the survey tool. Items were designed to limit scale length, with each item containing no more than five response categories. In addition, items
in the response scale were carefully designed to match the information being asked in the question, and vice versa. Consideration was given to ensure that bipolar scale items were evenly-tempered and not skewed to one side. Each scale item was given a written label so that respondents were not tasked with interpreting the weight of a number on a likert-scale. Whenever possible, written labels were also assigned a percentage range to help clarify the scale. While Dillman et al. (2014) recommend that survey designers try to avoid using matrices for ordinal close-ended questions, many appear in this survey. It was decided that the length of the survey would become unwieldy and overwhelming for respondents if each of these questions was to be a single item. Dillman et al. (2014) also stress the importance of a format that is visually appealing to the respondent, which has been, in part, accomplished by including matrices.

**Interview protocol.** A final interview protocol was developed after a preliminary analysis of the survey results. An interview protocol, sometimes called an interview guide or script (Kvale & Brinkmann, 2009), is a tool designed to provide procedural guidance and focus to an interview (Jacob & Ferguson, 2012). For this study, the interview protocol included probes to further explore the research questions, likely focusing mostly on barriers as well as strategies used to promote opportunities to find and sustain paid work experiences for program participants. The final interview protocol also included questions that aid in exploring other noteworthy findings identified in the survey results. The interview protocol can be found in Appendix B.

The protocol included an introduction section that provides a description of the research and informs participants of their rights. Questions were designed following the suggestions provided by Jacob and Ferguson (2012). The question section of the protocol began with basic
questions that are easy to answer in order to help make the interviewee feel comfortable. Following these items, interviewees were presented with survey results for each of the three research questions and asked to comment on these findings. Jacob and Ferguson (2012) also recommend that questions be written so that they are open-ended and inviting. Opening questions with phrases such as tell me about allow interviewees to understand that their voice is valued. Questions were broadly written, providing interviewees with an opportunity take the question in the direction of their choosing, allowing for increased potential for novel or unexpected information. In order to respect the time of the interviewees, the protocol was developed so that the interview is not too long in length, lasting approximately 30 minutes.

**Procedures**

**Survey administration.** Before the survey was administered, the research was approved by the Institutional Review Board (IRB) at Washington State University. Using the Think College database for PSE programs in the United States (Think College, n.d.), email addresses of program directors were collected. The database is included on the Think College website as a feature available to the general public. Email invitations including a description of the research and an active hyperlink to the survey were sent to prospective participants. The email has been designed based on the model provided by Dillman et al. (2014), and included a personalized greeting. The survey invitation is included in Appendix C. Utilizing the Qualtrics software, the survey was active for twenty-six days. A second email solicitation was sent after approximately two weeks reminding potential respondents of the value of their participation. When participants followed the hyperlink to the survey, they were asked to provide consent before accessing the survey questions.
As recommended by Dillman et al. (2014), an incentive was included for those who completed the survey. While the authors recommend that incentives are most effective when delivered along with the invitation to participate (before taking the survey), respondents in this study received the reward upon completion of the survey. A hyperlink at the end of the survey allowed users to enter a preferred email address to receive a code for a free movie rental from Redbox. This is an appropriate incentive as it is simple to request, receive, use, relatively inexpensive, widely available for redemption, and is of value to most people (Dillman et al., 2014).

**Measures to increase validity of the survey.** Validity refers to the accuracy of an instrument, or the extent to which a tool truly measures what it has been designed to measure (Lodico, Spaulding, & Voegtle, 2010). In order to increase the validity of the survey, measures were taken to limit the errors in the domains identified by Dillman et al. (2014) as the Four Cornerstones of Quality Surveys: Coverage Error, Sampling Error, Nonresponse Error, and Measurement Error.

**Design elements to reduce coverage error.** Coverage error occurs when a population is not properly represented by a sample. When coverage error exists, findings of a survey may not accurately represent the entire population because this group has been misrepresented. Due to the nature of this study, the opportunity to participate in this survey was given to a large percentage of the targeted population. Email addresses for program directors were collected from the Think College (n.d.) database of PSE programs in the United States. While this is not an exhaustive list of existing PSE programs (M. Grigal, personal communication, August 20, 2015), this database represents the most complete list of post-secondary education opportunities for students with ID. As of September 2015, there were 43 programs listed in the database. Each program listing
includes the email address of a contact person, which will be used to recruit participants. Although this is a comprehensive list of programs, there are likely programs that are not identified. As there are likely few programs not included in the list (M. Grigal, personal communication, August 20, 2015), the coverage error for this survey will be quite low as well.

**Design elements to reduce sampling error.** When a questionnaire is administered to a limited number of people in a sampling frame (i.e., the population of a sample), a study may contain a large sampling error. As the Think College (n.d.) database of PSE program directors is relatively small, it was possible to email nearly the entire sample, thus resulting in a low sampling error. In order to reduce sampling error, emails returned due to invalid email addresses were collected and functioning email addresses for these program directors were sought.

**Design elements to reduce nonresponse error.** Nonresponse error represents the extent to which results may have been influenced by those who did not respond to the request to complete the questionnaire. Although Dillman et al. (2014) explain that while there is not always a correlation, “higher response rates do reduce the likelihood of nonresponse error and thus provide greater credibility to a survey’s results than do lower response rates” (p. 6). As such, design elements were included to increase participation. Dillman et al. (2014) describe three general strategies to increase participant response rate: *increase benefits, decrease costs,* and *establish trust.*

Strategies to *increase benefits* involve encouraging respondents to understand that it is worthwhile to take the time and efforts to complete a voluntary questionnaire. The email solicitation and introduction to the questionnaire included a description of the purpose of the survey in order to inform participants how the results will be useful. In addition, these items were framed in a way so that participants understand that their expertise is being sought, thus
validating the value of their options and appealing to their interest of wanting to help. The affiliation with Washington State University (WSU) was featured prominently in the design of both the email solicitation and survey in order to remind participants that the research was being sponsored by a legitimate organization. In order to offer a monetary benefit, those who completed the survey were given an opportunity to receive a coupon code valid for a movie rental from Redbox.

In order to reduce the burden of response, design features were used to decrease costs of participation. First and foremost, the survey instrument was designed to not be of burdensome length. Items were evaluated so that only necessary information is collected and the survey was as brief as possible. Reviewers of the instrument were asked to evaluate the perceived complexity of items in order to make it as user-friendly as possible. The survey was designed to be as simple as possible, allowing respondents to easily navigate through the items and be given information regarding the progress toward completion. All materials were written in a professional tone, yet ease of readability was considered in order to decrease the time required to complete all of the items. The use of email solicitation with an active hyperlink to the Qualtrics questionnaire made it convenient and provides a comfortable environment for participants to respond.

With an increase of questionable or nefarious survey solicitation emails in today’s world, it is especially important for researchers to establish trust with potential respondents. While these practices may be more vital to those administering questionnaires to a less-specific population than the participants on this study, measures were still taken to promote a trusting relationship between the researcher and the respondents. The solicitation email and introduction to the questionnaire included contact information beyond an email address, including a mailing address
and phone number. Respondents were encouraged to contact the researcher with any questions or concerns. As discussed previously, the relationship with WSU was emphasized in order to assure participants that the survey is being administered by a legitimate organization. A statement identifying approval by the Institutional Review Board (IRB) was also included to inform participants that the research had been vetted by WSU. All materials were written in a professional tone and confidentiality of the participants was assured.

_{Design elements to reduce measurement error.}_ Measurement error occurs when respondents provide inaccurate information, generally because they either misunderstand the question or intentionally give false information. In order to protect against the latter, referred to as _response bias_, survey respondents were informed that the information they provide will remain confidential and that data will only be reported in aggregate form to protect their identity. Participants were notified of this in the initial email solicitation and then reminded again in the first page of the survey. The electronic platform, Qualtrics, allowed participants to decide a comfortable time and place complete the survey and without direct contact from the researcher. Providing an environment for respondents to answer questions without intervention from others helped increase the likelihood of including genuine responses.

_Conducting interviews._ Participants who completed the survey were given an opportunity to provide contact information if they were willing to participate in a follow-up interview. The purpose of the interview was to expand on the findings of the survey and identify additional components that may have not been explored in the content of the questionnaire. The sequential MM design allowed an opportunity for the researcher to interview participants with the quantitative findings in mind. Doing so strengthened the integrity of the results and MM inferences.
Potential interviewees were contacted via email and interviews were arranged at a time that was acceptable to both parties. Interviews were conducted on the telephone. As evident in the protocol (see Appendix B), interviewees were informed that their participation was voluntary and that their responses will remain confidential. While the interviewer knew the identify of the interviewees, names and affiliated institutions will not be included in any report of data. Interviewees were asked for permission to have the conversation audio recorded and subsequently transcribed for the purpose of data analysis. Audio recordings of the interviews were transcribed verbatim and used for analysis.

While the interview protocol provides structure, the semi-structured nature of the interview allowed for variation and deviation as the conversation progressed. Kvale and Brinkmann (2009) explain that rather than following a strict interview script, an effective interviewer is “sensitive and attentive to the situational cues that will allow him or her to go on with the interview in a fruitful way that will help answer the research question” (p. 139). Being successful in this arena requires that the interviewer be an active listener; attention must be given to how words are spoken in addition to what words are said.

As the interviews were being conducted, the researcher strived to meet the quality criteria for interviews identified by Kvale and Brinkmann (2009). These include: (a) a desire for rich, detailed, pertinent, and spontaneous responses from the interviewee, (b) limited questioning by the interviewer and long responses from the interviewee, (c) follow-up and requests for clarification by the interviewer when appropriate, (d) real-time interpretation by the interviewer over the course the interview, (e) attempts by the interviewer to verify his or her interpretation of the interviewees responses throughout the session, and (f) a resulting interview that stands on its own, requiring little or no additional explanation.
Data Analysis

Quantitative Analyses. Quantitative analyses were used to explore the survey results and find potential relationships between program characteristics and survey responses. Descriptive statistics and analyses of variance (ANOVAs) were run through SPSS 12.0 to determine the findings and answer the research questions. In addition, the results of these analyses guided the interview protocol per sequential mixed methods guidelines (Teddlie & Tashakkori, 2009). Descriptions of the quantitative measures used in the study, including response rates, are included below.

Response Rates. Lynn (2008) explains that response rate is an essential indicator of the success of a survey and can be used to identify the extent to which results from respondents represent a population. While response rate can be calculated using a variety of methods, Lynn (2008) recommends that the methods selected by researchers “should be consistent with other similar surveys” (p. 45). As such, the response rate for this study was calculated using the same method as Grigal, Hart, and Weir (2012). Their survey used the same database of PSE programs and also featured a web-based instrument. Response rate was calculated by dividing the number of completed surveys by the total amount of survey requests that were sent and converting this decimal into a percentage. Response rate for this survey was calculated using the same method.

Reliability of Measures. In order to check survey reliability, a post-hoc Crohnbach’s Alph will be determined. Field (2013) describes Chronbach's alpha as “the most common measure of scale reliability” (p. 708). Chronbach's alpha involves measuring variance within single items as well as variance between items within an instrument and is measured between 0 and 1.0 (Field, 2013). A generally acceptable value for Chronbach's alpha is .8 for initial and basic research scales (Nunnally & Bernstein, 1994).
**Descriptive Statistics.** Descriptive statistics to describe the respondents, as well as the program they represent were used in this opening section of the data analysis (Creswell, 2014). Analysis involving descriptive statistics was also used to explore the research questions involving barriers to facilitating work experiences and strategies used to support job training. The survey item designed to measure the extent to which something is a barrier to facilitating paid work experience opportunities asked participants to respond using the following unipolar scale: *not a barrier, small barrier, or large barrier, or critical barrier*. Percentages of participants responding positively to each of the scale items for each potential variable were calculated and used to identify which items are viewed as the most significant barriers. Respondents were given an opportunity to include any other barriers that were not presented on the list.

The survey item designed to identify commonly used strategies for facilitating paid job experiences for students in the program was designed in a similar manner. However, participants responded using a bipolar scale that includes the following options: *never, rarely, sometimes, often,* and *always*. These components were analyzed in a similar manner as the previously described survey item relating to barriers; percentages of positive responses for scale dimensions for each strategy were calculated to identify the strategies most frequently used. Also like the item involving barriers, respondents were given an opportunity to identify any other strategies that can provide potential talking points for the interview phase of the MM study.

**Analyses of Variance.** In order to explore how specific program characteristics may relate to the barriers faced by PSE programs when facilitating work experience opportunities (research question 3), exploratory inferential statistics will be utilized. The specific program characteristics included: (a) type of institution (i.e. college, university, community college, (b)
age of the program, (c) number of students enrolled, (d) number of years students are typically enrolled, (e) funding sources, (f) student outcome goals, (g) sources of employment supports, and (h) type of work experiences (e.g., individual or group, paid or unpaid, on-campus or off-campus).

For each barrier, a one-way analysis of variance (ANOVA) was completed to identify the extent to which responses involving the aforementioned program characteristics relate with the frequency of each barrier. One-way ANOVAs helped determine differences among program characteristics and their potential impact on facilitating work experience opportunities based on specific barriers. Coladarci, Cobb, Minium, and Clarke (2011) describe three assumptions associated with the use of ANOVA as a tool to analyze quantitative data. These assumptions include: (a) the groups contain samples that are independent, (b) the populations are normally distributed, and (c) homogeneity of variance exists.

In order to mitigate the possibility of a Type 1 error, a post-hoc Bonferroni error correction was utilized. Armstrong (2014) explains that the Bonferroni’s correction should be considered in several scenarios, including in this case where “a large number of tests are carried out without preplanned hypotheses in an attempt to establish any results that may be significant” (p. 505). Items that met the threshold for significance (p < .05) were further explored within the context of the research and literature to provide understanding of potential relationships. This statistical analysis was completed using the software IBM SPSS, Version 23.0.

Missing data were handled using pairwise, or available case deletion. Allison (2002), describes this method as simply calculating resulting without accounting for missing responses, or using only the data points that are available. When data are missing completely at random (MCAR), pairwise deletion may be more efficient than listwise deletion, which involves
eliminating the entire set responses for all participants failed to respond to one or more items on the survey (Allison, 2002).

**Qualitative analysis.** Qualitative interview data were analyzed using thematic analysis. Braun and Clarke (2006) explain that there is not one agreed upon definition or set of procedures for thematic analysis and note that this process is not affiliated with a specific approach. As such thematic analysis can be used within a variety of theoretical frameworks. The authors do, however, provide guidelines describing six phases for researchers engaging in thematic analysis, including familiarization with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report.

**Phase one: Familiarizing yourself with the data.** As data were collected by the researcher, familiarization began in real-time as interviews were being conducted. The researcher transcribed the data shortly after each interview as completed. While it is possible to hire a professional transcription service, Braun and Clark (2006) recommend researchers complete this process themselves to help become more intimate with the dialogue. The researcher then engaged in *immersion* of the data, which involves repeated reading and listening and taking preliminary notes regarding potential coding themes. Transcribed interviews were imported into the qualitative analysis software program Atlas.Ti, Version 1.0.23 for further analysis.

**Phase two: Generating initial codes.** Codes identify the most simple and basic raw data segments that are of interest to the analyst. Initial ideas for codes generated from the first phase of analysis were further developed, explored, and solidified. Coding followed the *theoretical thematic analysis* approach, meaning that the process was completed with specific research questions in mind. Braun and Clarke (2006) recommend that during this phase, researchers: (a) code for a wide variety of themes, even if they go beyond what is being explored in the topic, (b)
include some of the text surrounding the data extracted to provide context during analysis, and (c) remember that segments of data can potentially be assigned multiple codes.

**Phase three: Searching for themes.** After all of the interview transcripts were coded, analysis moved to a broader focus involving identifying and developing themes. Coded data extracts were be analyzed at their face value without an attempt to seek meaning beyond what was spoken by the interviewee, a process identified by the Braun and Clarke (2006) as the semantic approach. In order to help identify how codes can be best organized into larger themes, a thematic map was created to provide a visual representation of the analysis. This process helped solidify the contents of a theme and identify sub-themes as necessary. When working with a data set, there are no hard and fast rules as to what constitutes a theme. Rather then developing a set of rules to identify what constitutes a theme, Braun and Clarke (2006) recommend that researchers maintain flexibility and use their professional judgment during this phase.

**Phase four: Reviewing themes.** This phase involved revisiting the themes identified in the previous phase and evaluating their appropriateness on two levels. At the first level, coded data extracts were reviewed to ensure they do, in fact, form a cohesive pattern. Data extracts that do not fit with the theme were removed or reorganized into new themes, different themes, or sub-themes. The second level of this phase involved reviewing the thematic map to ensure it properly represents the data set.

**Phase five: Defining and naming themes.** Once the thematic map was developed and reviewed, a name and definition for each theme and sub-theme were created and refined. Braun and Clarke (2006) recommend that researchers identify the essence of each theme and explain the story that each has to tell. This phase also involved exploring connectedness and overlap of
themes and how each relate to the research questions. When the researcher was able to fully
describe the scope of a theme in only few sentences, this phase is complete.

**Phase six: Producing the report.** The final phase of analysis involved writing the final report. This report of the data is rich with direct quotes from the interviewees that represent the material identified in the thematic maps. Braun and Clark (2006) explain that the report must tell a story and that the “analytic narrative needs to go beyond description of the data, and make an argument in relation to your research question” (p. 93).

**Measures to increase credibility of interview data analysis.** Analysis of the interview transcriptions included features that reflect the interview credibility measures described by Brantlinger, Jimenez, Klingner, Pugach, and Richardson (2005). Methodological triangulation involves approaching research questions by utilizing multiple methods in order to find consistency in findings. Data resulting from the survey phase of the study were used in conjunction with interview findings to help support claims related to the research questions. During the data analysis, credibility increased through the practice of seeking disconfirming evidence, or data extracts that are non-consistent with the themes. Identifying data that do not represent the majority view gives voice to those in the minority perspective. The final report included sufficient direct quotations from interviewees to create a thick, detailed description that supports the findings of the study.

Brantlinger et al. (2005) explain that credibility will be increased by using the practice of member checks. Member checking took place after analysis had been completed to ensure that the views of the interviewees have been properly represented. Interviewees were emailed written sections of the results section that describe information they provided. They were encouraged to respond with any concerns they have regarding representation of the information they provided.
in their interview The utilization of outside perspectives provided feedback on analyses and interpretations.

In order to increase credibility of the results, a second coder reviewed and coded the data. Having an additional perspective during analysis meets the credibility measure of investigator triangulation (Brentlinger et al., 2005). The second coder was an individual who is has an extensive background in special education practices and is familiar with qualitative research methods. A codebook (i.e. list of codes) was provided to the second coder, who then independently coded the data. Results from both coders were considered during the analysis phase of the study. Inter-rater reliability was conducted to secure the codings were appropriate and matched the overall findings of the qualitative data analysis.

**Researcher reflexivity.** In order to increase the credibility, Brantlinger et al. (2005) recommend that those conducting qualitative research engage in *researcher reflexivity.* They describe this practice occurring when “researchers attempt to understand and self-disclose their assumptions, beliefs, values, and biases” (p. 202). The following represents a brief summary of my personal perspectives regarding the research topic.

**Personal reflexivity.** The need for preparing youth with disabilities to be successful after high school is a topic that is close to my heart. As a transition practitioner who delivers service to students with disabilities through age 21 in a mostly school-based program, I understand the value of, and appreciate the opportunities PSE programs give students; the ability to run a program without the constraints of a regular high school bell schedule is invaluable for students. I am also personally close with students who have exited services at age 21 without adequate preparation to be successful in the world of employment. PSE programs provide opportunities for students that cannot be matched in other settings.
I am also a firm believer in the importance of providing work experience opportunities for youth with disabilities. However, although paid work experience is generally accepted to be more valuable to students than unpaid, or volunteer, work experiences, I am not sure that it makes a difference for many students. Generally speaking, my students who have been able to find paid work experience have not been interested in the money. Perhaps, my experiences are skewed, but for at least my population of students age 18-21, I am not sure that it matters that work experiences be paid.

I am interested in challenges and barriers to finding work experiences because it is something I think about as a practitioner. I find many challenges when helping facilitate work experiences for my students with disabilities and wonder if there are similar challenges for those who work for a PSE program. In the same vein, I am curious to learn more about strategies to promote opportunities for work experiences for youth with disabilities. The more I know, the better I can serve my students.

**Meta-Inference.** The result of a MM design involves the development of inferences. Teddlie & Tashakkori (2009) define inferences as “conclusions and interpretations that are made on the basis of collected data in a study” (p. 287). Inferences go beyond what is presented in data. Inferences represent the big picture and are not necessarily limited to exploring the research questions that were identified before the study had begun. MM research features meta-inferences that represent findings that incorporate inferences from multiple phases of the study. In this study, results from the quantitative survey and qualitative interviews were used to develop inferences and subsequent meta-inferences to explore the a priori research questions, and perhaps beyond.

*The inference process.* Teddlie & Tashakkori (2009) describe the inference process as an
opportunity for one to reflect on the entire journey of the research “in an effort to make sense of data by connecting the dots” (p. 287). The authors provide guidelines that were considered during various phases of the research to assist in developing inferences.

During analysis of the data, the research questions and purpose of the study were prominent in the mind of the author. Notes and summaries of data were re-examined and discussed out loud, both individually and with peers. This allowed the researcher to establish tentative interpretations, which were then re-evaluated for meaning, understanding potential perspectives of participants, and relation to other preliminary findings. The inference process also involved the researcher revisiting the original rationale for MM and the specific qualitative and quantitative methods that were selected prior to collecting data.

**Evaluating the quality of inferences.** Teddlie and Tashakkori (2009) explain that researchers must engage in exploring the quality of the inferences, or conclusions, generated from MM research. This will first occur as the findings from each the qualitative and quantitative components of the study are evaluated, and then again for the meta-inferences. In order to evaluate the quality of MM inferences, Teddlie and Tashakkori (2009) describe attributes of quality research in both design of the study as well as the rigor of interpretation.

**Evaluating the quality of design.** Teddlie and Tashakkori (2009) provide four guidelines designed to assist researchers in evaluating the extent to which appropriate research methods and procedures have been implemented for the study. These four criteria will be used to measure the appropriateness to tools used in this study, including:

1. Design suitability/appropriateness: The relationship between the research questions and methods selected to explore these questions were evaluated. Was this sequential MM design with a quantitative survey and qualitative interviews the best way to explore the research
questions?

2. Design fidelity/adequacy: It was necessary to evaluate the extent to which the research plan was implemented with fidelity. Did the study follow the plan outlined in the proposal? If not, why was it necessary to deviate from the original plan?

3. Within-design consistency: As the design for this study contains two related components, it was necessary to explore how the quantitative phase impacted the qualitative process. Questions posed in the interviews must have reflected findings that resulted from the analysis of the survey.

4. Analytic adequacy: In addition to ensuring that each component of the study had been properly analyzed, the quality of analysis used to identify MM inferences were also be explored. It was essential that I looked beyond findings from the review of previous literature to identify any new themes that have emerged.

*Evaluating the rigor of interpretation.* Evaluating the interpretive process in MM research improves the strength of the inferences. In order to strengthen the findings of this study, the six criteria for evaluating the rigor of the interpretation, as identified by Teddlie and Tashakkori (2009), were utilized. These include:

1. Interpretive consistency: Inferences were evaluated to ensure that they are both consistent with the evidence and are presented and framed indicating an appropriate magnitude. Inferences reflect both the qualitative and quantitative data sources.

2. Theoretical consistency: Connections between the inferences and information presented in the literature were discussed. In addition, instances where findings from this study that are not present or counter to those presented in the literature were also discussed.

3. Interpretive agreement: While inferences were identified by the researcher, they were
presented in a manner that describes the process by which they were developed. The analysis process was reviewed with another researcher in order to strengthen the inferences.

4. Interpretive distinctiveness: Efforts were made to explain why the resulting inferences are more plausible than other potential conclusions. Considering the viability of other potential inferences increases the strength of the conclusions that have not been rejected as a result of the process.

5. Integrative efficacy: While inferences were developed following each the quantitative and qualitative phases of the study, meta-inferences involve the integration of these inferences from the two sources of data. Teddlie and Tashakkori (2009) explain integration to mean “making meaningful conclusions on the basis of consistent or inconsistent results” and may include “linking, elaboration, completeness, contrast, comparison, and the like” (p. 305). The integration of inferences to create meta-inferences is an essential feature of MM research, and as such, was evaluated as its own entity.

6. Interpretive correspondence: Once the meta-inferences were developed and evaluated, a final review involved exploring the connectedness between the meta-inferences and the research questions. An audit to ensure alignment between purpose of the study and resulting meta-inferences was conducted.

Summary

In order to explore the three research questions involving PSE programs and facilitating work experiences for students, sequential MM research design was followed. PSE program directors were surveyed with an on-line instrument to better understand their programs as well as barriers to and strategies to promote work experience opportunities for their students. Survey respondents had the opportunity to self-identify themselves as an individual who was willing to
participate in a follow-up interview. Once the survey was conducted and a preliminary analysis had been completed, interview participants were interviewed via telephone. The results of both phases of the study were analyzed together to develop meta-inferences to explore the research questions.
CHAPTER FOUR

RESULTS

Quantitative Survey

An online survey was administered to personnel who work with post-secondary education (PSE) programs that serve students with intellectual disabilities (ID). The survey focused on employment services, with an emphasis on barriers to facilitating student work experience and strategies utilized to overcome potential obstacles.

Survey validation. To determine reliability of the survey instrument, an analysis using Cronbach’s alpha was completed. The analysis resulted in a .87, which indicates a good range of internal consistency (Litwin, 1995).

Response rate. Requests to complete the survey were emailed in the first week of December, 2015 through the email function of the Qualtrics platform. While the Think College! database indicated a total of 245 programs, only 229 emails were sent in the first round of solicitation due to duplicate contact personnel. In addition, two programs were eliminated because they did not meet the criterion of existing within the United States. Of the 229 solicitations, 19 emails were rejected and returned due to invalid addresses. Efforts were made to locate updated contact information for these 19 potential participants through an internet search. New contact information for 11 out of the 19 programs was found, however one of these emails was also returned. These combined efforts resulted in a total of 220 email requests being sent for the initial round of solicitations. A reminder email was sent to individuals who had not completed the survey after two weeks. After an additional two weeks, the survey was closed with a total of 75 participant responses.
The same method used by Grigal, Hart, and Weir (2012) was followed to determine response rate. Response rate was calculated by dividing the number of completed surveys by the total amount of survey requests that were sent and converting this decimal into a percentage. The 75 responses from 220 email solicitations calculates to a response rate of 34%.

However, a preliminary analysis eliminated 10 responses from data analysis. When asked about their role in the PSE program, four respondents selected: None of my job responsibilities involve designing and/or facilitating career development opportunities (including work experience) for students in the program. As the survey was designed for those who facilitate work experiences, the instrument was programmed to end if this option was selected. Six respondents provided demographic and program characteristics, but did not complete the sections focused on barriers and strategies. As these components are essential for data analysis, these six responses were eliminated from all of the analysis. Considering both of these factors, analysis of data included information from 65 participants, meaning 29.5% of the total survey solicitations resulted in usable data.

**Demographic information.** The first sections of the survey asked respondents to provide information about the PSE program for which they work.

**General program characteristics.** A table displaying descriptive results regarding PSE program characteristics can be found in Table 1. Respondents were asked how many years he or she had worked for the PSE program. While the mode was 6 or More Years (30.8%), 43% of respondents indicated working between one and four years for the PSE program. When asked to describe the type of institution with which their PSE program was affiliated, 58.5% of respondents identified University, with the next most frequent choice being Community College (21.5%). Respondents were asked identify the number of years their PSE program had been in
existence and the mode was More than 6 years (35.4%). In order to better understand of the size of the programs, the survey included an item asking respondents to select a range that best represented the number of students typically enrolled in their program. The mode was 1 – 10 Students (38.5%), with the frequency for each category representing a higher number of students progressively decreasing. The survey asked participants to identify the intended duration of their PSE program. Just over 50% of respondents identified their program as a two-year course of study for the majority of their students.

Table 1

*General Program Characteristics of Respondents*

<table>
<thead>
<tr>
<th>Number of Years Respondent Has Worked in the PSE program</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>9.2%</td>
</tr>
<tr>
<td>1-2 Years</td>
<td>21.5%</td>
</tr>
<tr>
<td>3-4 Years</td>
<td>21.5%</td>
</tr>
<tr>
<td>5-6 Years</td>
<td>15.4%</td>
</tr>
<tr>
<td>More than 6 years</td>
<td>30.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of Respondents’ of Post-Secondary Institution</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
<td>7.7%</td>
</tr>
<tr>
<td>University</td>
<td>58.5%</td>
</tr>
<tr>
<td>Community College</td>
<td>21.5%</td>
</tr>
<tr>
<td>Junior College</td>
<td>1.5%</td>
</tr>
<tr>
<td>Vocational or Trade School</td>
<td>9.2%</td>
</tr>
<tr>
<td>Number of Years the PSE Program Has Existed</td>
<td>Percent of Respondents</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>6.2%</td>
</tr>
<tr>
<td>1-2 Years</td>
<td>13.8%</td>
</tr>
<tr>
<td>3-4 Years</td>
<td>15.4%</td>
</tr>
<tr>
<td>5-6 Years</td>
<td>27.7%</td>
</tr>
<tr>
<td>More than 6 Years</td>
<td>35.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Students Enrolled in the PSE Program</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10 Students</td>
<td>38.5%</td>
</tr>
<tr>
<td>11-20 Students</td>
<td>23.1%</td>
</tr>
<tr>
<td>21-30 Students</td>
<td>15.4%</td>
</tr>
<tr>
<td>31-40 Students</td>
<td>12.3%</td>
</tr>
<tr>
<td>More than 40 Students</td>
<td>10.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intended Duration of PSE Program for Students</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Year</td>
<td>12.3%</td>
</tr>
<tr>
<td>2 Years</td>
<td>50.8%</td>
</tr>
<tr>
<td>3 Years</td>
<td>16.9%</td>
</tr>
<tr>
<td>4 Years</td>
<td>16.9%</td>
</tr>
<tr>
<td>More than 4 Years</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

*Note. n = 65.*

*Funding mechanisms.* Table 2 (found below) contains the complete results describing PSE program funding mechanisms. The matrix contained in the survey included 11 different
items and respondents were asked to identify if each funding mechanism provided *No Contribution* or was a *Small Contributor* or *Large Contributor* to support the sustainability of their program. The most frequent response for *Large Contributor* was *Private Pay* (56.9%), which had more than twice as many responses as the next most frequent item, *School District* (26.2%). No additional funding mechanisms had more than 20% of respondents identify the item as being a *Large Contributor*. All but three of the 11 funding mechanisms included in the matrix were identified by over 50% of respondents as providing *No Contribution*, including *Private Pay* (15.4%), *Vocational Rehabilitation* (40%), and *Adult Intellectual/Developmental Disability Agencies* (41.5%). Respondents were provided with an opportunity to describe any funding mechanisms they used to support their program. Additional items included fundraising, as well as financial support from a county Higher Education Commission.

Table 2

*Funding Mechanisms to Support PSE Program*

<table>
<thead>
<tr>
<th>Funding Mechanism</th>
<th>No Contribution</th>
<th>Small Contributor</th>
<th>Large Contributor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private pay (student &amp; family)</td>
<td>15.4%</td>
<td>24.6%</td>
<td>56.9%</td>
</tr>
<tr>
<td>University scholarships or tuition waivers</td>
<td>50.8%</td>
<td>32.3%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Local school district</td>
<td>50.8%</td>
<td>20%</td>
<td>26.2%</td>
</tr>
<tr>
<td>Adult intellectual/ developmental disability provider agencies</td>
<td>41.5%</td>
<td>38.5%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Financial aid (Pell grants, etc.)</td>
<td>63.1%</td>
<td>21.5%</td>
<td>10.8%</td>
</tr>
<tr>
<td>TPSID grant (US Department of Education)</td>
<td>66.2%</td>
<td>10.8%</td>
<td>18.5%</td>
</tr>
<tr>
<td>Federal/State grant (non-TPSID)</td>
<td>75.4%</td>
<td>6.2%</td>
<td>10.8%</td>
</tr>
</tbody>
</table>
### Outcome goals

Respondents were asked to identify the extent to which six potential outcome goals are prioritized by their PSE program (response frequencies are included below in Table 3). The six outcome goals included: *Access to College Courses, Improved Independent Living Skills, Improved Academic Skills, Improved Competitive Employments, Improved Social Skills, and The Opportunity to Have a College Experience*. For each outcome goal, respondents were asked to identify if it was: *Not a Priority, Low Priority, Moderate Priority, or High Priority*. With the exception of *Improved Academic Skills* (46%), each outcome goal was identified by respondents as being a *High Priority*. The two outcome goals most frequently identified as being a *High Priority* were *Improved Competitive Employment* (90.8%) and *Improved Social Skills* (87.7%). *Improved Competitive Employment* was the only outcome goal that was not identified by any respondents as being *Not a Priority* or *Low Priority*. Respondents were provided with an opportunity to describe other program outcome goals for students. Five respondents described additional program outcome goals as involving increased student self-advocacy or self-determination skills. Other responses not associated with one of the six outcome goals in the matrix included: use of technology, individualized IEP goal completion, well-rounded transition services, community integration, wellness, industry certifications, and executive functioning skills.
Table 3

Prioritization of Student Outcome Goals

<table>
<thead>
<tr>
<th>Outcome Goal</th>
<th>Not a Priority</th>
<th>Low Priority</th>
<th>Moderate Priority</th>
<th>High Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to college courses</td>
<td>4.6%</td>
<td>9.2%</td>
<td>21.5%</td>
<td>63.1%</td>
</tr>
<tr>
<td>Improved independent living skills</td>
<td>0%</td>
<td>6.2%</td>
<td>16.9%</td>
<td>75.4%</td>
</tr>
<tr>
<td>Improved academic skills</td>
<td>1.5%</td>
<td>15.4%</td>
<td>30.8%</td>
<td>46%</td>
</tr>
<tr>
<td>Improved competitive employment</td>
<td>0%</td>
<td>0%</td>
<td>6.2%</td>
<td>90.8%</td>
</tr>
<tr>
<td>Improved social skills</td>
<td>0%</td>
<td>1.5%</td>
<td>9.2%</td>
<td>87.7%</td>
</tr>
<tr>
<td>The opportunity to have a college experience</td>
<td>1.5%</td>
<td>4.6%</td>
<td>15.4%</td>
<td>76.9%</td>
</tr>
</tbody>
</table>

Note. n = 65.

*Job training information.* In order to better understand employment services offered by PSE programs, respondents were asked to identify sources of job training supports. Compiled results for this item can be found in Table 4. Specifically, the survey asked participants to identify if *None, Some, Most,* or *All* students received job supports from the following sources: *School District Personnel, Vocational Rehabilitation Counselors, Peer Mentors, Local Disability Support or Advocacy Agencies,* and *Job Coach Employed by the PSE Program.* Two of the sources were identified by at least 25% respondents as providing employment supports to *All* students in the PSE program, including *Job Coach Employed by the PSE Program* (30.8%) and *Peer Mentors* (27.7%). Sources of support that provide no employment-related supports (*None*) for at least 25% of respondents include: *School District Personnel* (53.8%), *Local Disability Support or Advocacy Agencies* (40%), and *Vocational Rehabilitation Counselors* (27.7%).
Table 4

Sources of Employment-Related Supports

<table>
<thead>
<tr>
<th>Source</th>
<th>None</th>
<th>Some Students</th>
<th>Most Students</th>
<th>All Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>School district personnel</td>
<td>53.8%</td>
<td>13.8%</td>
<td>15.4%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Vocational rehabilitation counselors</td>
<td>27.7%</td>
<td>30.8%</td>
<td>24.6%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Peer mentors</td>
<td>13.8%</td>
<td>35.4%</td>
<td>20%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Local disability support or advocacy agencies</td>
<td>40%</td>
<td>35.4%</td>
<td>7.7%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Job coach employed by PSE</td>
<td>24.6%</td>
<td>21.5%</td>
<td>18.5%</td>
<td>30.8%</td>
</tr>
</tbody>
</table>

Note. n = 65.

Using the same scale of None, Some, Most, or All, respondents were asked to describe the number of students engaged in certain types of work experiences. Statements to describe the settings featured variables including: Paid/Unpaid, Group/Individual, and On-Campus/Community/Sheltered Workshop. A compiled list of responses is included in Table 5. Only two of the eight work settings were identified by more than one single respondent (1.5%) as being utilized by All students in the PSE program. These include Unpaid Internships/Volunteering On Campus (24.6%) and Unpaid Internships/Volunteering In The Community (20%). When looking at Paid settings, Individual Paid Work in the Community was the most frequently identified (Most Students, 16.9%; Some Students, 56.9%). A large percentage of respondents identified sheltered workshops (mostly co-workers with disabilities) as a setting where None of their students received job training (Unpaid Sheltered Workshop, 89.2%; Paid Sheltered Workshop, 84.6%).
Table 5

*Descriptions of Work Experience Setting for Students in PSE Program*

<table>
<thead>
<tr>
<th>Work Setting</th>
<th>None</th>
<th>Some Students</th>
<th>Most Students</th>
<th>All Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual paid work (paid by the employer) in the community</td>
<td>18.5%</td>
<td>56.9%</td>
<td>16.9%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Individual paid work (paid by the employer) on campus</td>
<td>44.6%</td>
<td>36.9%</td>
<td>7.7%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Group paid work (enclave or mobile work crew) in the community</td>
<td>80%</td>
<td>6.2%</td>
<td>12.3%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Group paid work (enclave or mobile work crew) on campus</td>
<td>87.7%</td>
<td>4.6%</td>
<td>1.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Unpaid internships/ volunteering in the community</td>
<td>10.8%</td>
<td>36.9%</td>
<td>27.7%</td>
<td>20%</td>
</tr>
<tr>
<td>Unpaid internships/ volunteering on campus</td>
<td>16.9%</td>
<td>32.3%</td>
<td>20%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Paid sheltered worksite (mostly co-workers with disabilities)</td>
<td>84.6%</td>
<td>7.7%</td>
<td>1.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Unpaid sheltered worksite (mostly coworkers with disabilities)</td>
<td>89.2%</td>
<td>3.1%</td>
<td>1.5%</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Note. n = 65.*

**Vocational rehabilitation information.** In order to glean more information about the relationships PSE programs had with vocational rehabilitation (VR) counselors, respondents who worked with this agency were asked to *Strongly Disagree, Disagree, Agree, or Strongly Agree* with six statements. Responses are detailed in Table 6. Forty-one respondents (63% of total respondents) indicated that students in their program accessed VR services and completed this section of the survey. These respondents generally indicated positive relationships with VR. More than 60% of respondents indicated that they *Agree or Strongly Agree* with each of the six
statements and fewer than 10% responding Strongly Disagree to each. The most strongly supported statement was Our students continue to utilize VR resources after they leave the program, with 84.5% responding Agree or Strongly Agree.

Table 6

Questions Related to Vocational Rehabilitation

<table>
<thead>
<tr>
<th>Item Included in Survey</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our partnership with VR helps students find paid work experiences</td>
<td>9.8%</td>
<td>19.5%</td>
<td>51.2%</td>
<td>19.5%</td>
</tr>
<tr>
<td>The VR counselor demonstrates knowledge of individual students and their interests</td>
<td>4.9%</td>
<td>22%</td>
<td>53.7%</td>
<td>17.1%</td>
</tr>
<tr>
<td>My schedule allows me sufficient time to collaborate with the VR counselor</td>
<td>9.8%</td>
<td>26.8%</td>
<td>53.7%</td>
<td>9.8%</td>
</tr>
<tr>
<td>The VR counselor is available to collaborate with students in our program</td>
<td>0%</td>
<td>29.3%</td>
<td>58.6%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Our students continue to utilize VR resources after they leave the program</td>
<td>2.4%</td>
<td>9.8%</td>
<td>58.6%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Our VR counselor demonstrates knowledge of supports available to students in post-secondary education programs</td>
<td>9.8%</td>
<td>26.8%</td>
<td>43.9%</td>
<td>17.1%</td>
</tr>
</tbody>
</table>

Note. n = 41.

Other employment-related items. The survey concluded with eight additional items to better understand employment-related services offered by PSE programs. Respondents were asked to Strongly Disagree, Disagree, Agree, or Strongly Agree with each statement. A complete list of results related to employment can be found in Table 7.

PSE staff are confident in their ability to prepare students for positive employment outcomes after they leave the program; 81.5% of survey participants responded either agree or
strongly agree to the statement Students will be able to sustain paid employment when they finish our program. Survey responses also suggested that employers found value in providing paid work experiences, with 78.5% of participants responded either agree or strongly agree with the statement Employers who have hosted students in the past are usually willing to do so again. Many employers who had less than ideal experiences working with students in PSE programs are willing to re-engage in work experience; 61.5% of survey participants responded either agree or strongly agree with the statement Employers are willing to work with our students, even if they have had a bad experience previously.

PSE staff generally saw positive employment-related outcomes for their students as a priority. Over 90% of survey respondents identified Improved Competitive Employment as a high priority, which was the highest percentage of responses of the six outcomes areas included on the survey. Additionally, not a single survey respondent identified Improved Competitive Employment as being Not a Priority or a Low Priority. PSE program staff seemed view their program as supporting competitive employment outcomes for students with ID.

In order to increase opportunities for positive competitive employment outcomes, many PSE programs provide opportunities for student to engage in work experience in integrated environments (i.e., not a sheltered workshop). Nearly 85% of programs had no students in paid sheltered workshop positions and over 89% had no students in unpaid sheltered workshop experiences.

While this is the case, the number of students engaged in individual paid work experiences is relatively low. Only 3% of programs identified arrangements in which all students are engaged in individual paid work experience in the community or on-campus. Even relatively
low percentages of programs identified *most students* as being involved with paid work experiences in the community (16.9%) or on-campus (7.7%).

Table 7

*Other Employment-Related Survey Items*

<table>
<thead>
<tr>
<th>Item Included in Survey</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>We facilitate opportunities for students to work in the summer months between academic years</td>
<td>7.7%</td>
<td>24.6%</td>
<td>47.7%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Our students find paid employment during the summer months between academic years</td>
<td>4.6%</td>
<td>24.6%</td>
<td>52.3%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Students will be able to sustain paid employment when they finish our program</td>
<td>3.1%</td>
<td>3.1%</td>
<td>56.9%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Employers who have hosted students in the past are usually willing to do so again</td>
<td>1.5%</td>
<td>1.5%</td>
<td>40%</td>
<td>38.5%</td>
</tr>
<tr>
<td>Employers are willing to work with our students, even if they have had a bad experience previously</td>
<td>3.1%</td>
<td>15.4%</td>
<td>44.6%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Our program is able to procure work experience opportunities for every student that is interested</td>
<td>3.1%</td>
<td>13.8%</td>
<td>41.5%</td>
<td>29.2%</td>
</tr>
<tr>
<td>Students talk directly with employers themselves when seeking paid work experiences</td>
<td>1.5%</td>
<td>27.7%</td>
<td>44.6%</td>
<td>15.4%</td>
</tr>
<tr>
<td>Family member express an expectation that the student will find work after completing our program</td>
<td>1.5%</td>
<td>6.2%</td>
<td>53.8%</td>
<td>26.2%</td>
</tr>
</tbody>
</table>

*Note. n = 65.*

**Research Question 1: Barriers and non-barriers to work experience.** Respondents were given a list of 29 potential barriers they may face when facilitating work experiences for students enrolled in their PSE program. For each item, respondents were asked to identify the extent to which each was a barrier. The four options for response included: *Not a Barrier, Small Barrier, Large Barrier,* and *Critical Barrier.* A complete listing of responses for each of the 29
barriers can be found in Table 8.

Table 8

**Barriers to Finding Paid Work Experience for Students**

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Not a barrier</th>
<th>Small barrier</th>
<th>Large Barrier</th>
<th>Critical Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Staff Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our staff’s lack of training regarding integrated employment</td>
<td>56.9%</td>
<td>27.7%</td>
<td>7.7%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Our staff’s lack of training regarding customized employment</td>
<td>52.3%</td>
<td>27.7%</td>
<td>12.3%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Our staff’s lack of training regarding job development</td>
<td>53.8%</td>
<td>21.5%</td>
<td>9.2%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Inadequate number of staff hours to support students in the workplace</td>
<td>38.5%</td>
<td>24.6%</td>
<td>13.8%</td>
<td>18.5%</td>
</tr>
<tr>
<td><strong>Student Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students' lack of job skills</td>
<td>9.2%</td>
<td>66.2%</td>
<td>21.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Students' low self-motivation (lack of initiative)</td>
<td>21.5%</td>
<td>47.7%</td>
<td>20%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Students' lack of self-responsibility (not trustworthy)</td>
<td>40%</td>
<td>49.2%</td>
<td>7.7%</td>
<td>0%</td>
</tr>
<tr>
<td>Students' low self-accountability (low quality control)</td>
<td>30.8%</td>
<td>49.2%</td>
<td>15.4%</td>
<td>0%</td>
</tr>
<tr>
<td>Students' problem behaviors</td>
<td>44.6%</td>
<td>43.1%</td>
<td>7.7%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Students' poor hygiene</td>
<td>41.5%</td>
<td>50.8%</td>
<td>4.6%</td>
<td>0%</td>
</tr>
<tr>
<td>Students poor attendance</td>
<td>38.5%</td>
<td>55.4%</td>
<td>0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Students enter the program without adequate employability training</td>
<td>13.8%</td>
<td>49.2%</td>
<td>15.9%</td>
<td>13.8%</td>
</tr>
<tr>
<td>Students enter the program without adequate vocational assessments</td>
<td>26.2%</td>
<td>38.5%</td>
<td>23.1%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Finding time in the student’s schedule</td>
<td>47.7%</td>
<td>6.2%</td>
<td>41.5%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Transportation Issues</td>
<td>10.8%</td>
<td>33.8%</td>
<td>26.2%</td>
<td>26.2%</td>
</tr>
<tr>
<td>Students' low reading skills</td>
<td>24.6%</td>
<td>53.8%</td>
<td>15.4%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Students' low math skills</td>
<td>26.2%</td>
<td>56.9%</td>
<td>10.8%</td>
<td>3.1%</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Students' low-level of fluency with technology</td>
<td>26.2%</td>
<td>52.3%</td>
<td>16.9%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

**Business Factors**

| Change in management in businesses | 35.4% | 46.2% | 10.8% | 1.5% |
| Limited number of weekly available hours offered by employers | 20% | 46.2% | 20% | 7.7% |
| Employers unwillingness to work with individuals with disabilities | 21.5% | 47.7% | 13.8% | 10.8% |
| Employer perceptions of the abilities of people with disabilities | 15.4% | 32.3% | 24.6% | 21.5% |
| Employer concerns regarding accommodations | 20% | 47.7% | 18.5% | 7.7% |
| Layoffs due to seasonal work | 58.5% | 20.2% | 12.3% | 3.1% |
| Lack of paid jobs in the area | 43.1% | 27.7% | 10.8% | 13.8% |

**Family Factors**

| Concerns of family members | 26.2% | 47.7% | 15.4% | 7.7% |
| Over-involvement of family members | 18.5% | 46.2% | 21.5% | 10.8% |
| Under-involvement of family members | 26.2% | 52.3% | 16.9% | 4.6% |

*Note. n=65.*

Three items were identified by more than 15% of respondents as a Critical Barrier, including: Transportation issues (26.2%), Employer perceptions of the abilities of people with disabilities (21.5%), and Inadequate number of staff hours to support students in the workplace (18.5%). When combining the response categories of Large Barrier and Critical Barrier, 30% or more of respondents identified concerns for four individual items. These include: Transportation issues (52.4%), Employer perceptions of the abilities of people with disabilities (46.1%), Finding time in the student’s schedule (46.1%), and Inadequate number of staff hours to support students.
in the workplace (32.3%). Some items were listed by a low percentage of respondents as being Not a Barrier, suggesting that they these barriers may be widely encountered on some level. Items identified as Not a Barrier by 15% or fewer respondents include: Students' lack of job skills (9.2%), Transportation issues (10.8%), and Students enter the program without adequate employability training (13.8%).

Respondents generally identified the items in this section of the survey as being less of a barrier rather than more. For example, 13 of the 29 items were identified by 30% or more respondents as being Not a Barrier. These items include: Layoffs due to seasonal work (58.5%), Our staff’s lack of training regarding integrated employment (56.9%), Our staff’s lack of training regarding job development (53.8%), Our staff’s lack of training regarding customized employment (52.3%), Finding time in the student’s schedule (47.7%), Lack of paid jobs in the area (43.1%), Students' poor hygiene (41.5%), Students' lack of self-responsibility- not trustworthy (40%), Inadequate number of staff hours to support students in the workplace (38.5%), Students poor attendance (38.5%), Changes in management in businesses (35.4%), and Students' low self-accountability- low quality control (30.8%). The general lack of barriers is further exemplified by noting that only two of the 29 items were identified as Not a Barrier or a Small Barrier by fewer than 50% of respondents (Transportation issues, 44.6%; Employer perceptions of the abilities of people with disabilities 47.7%).

In order to identify items not included on the list, respondents were provided with an opportunity to include any additional barriers they face when facilitating work experience opportunities for students enrolled in their affiliated PSE program. Eleven respondents included written comments to describe additional barriers. The most prominent theme from the comments involved student and family concerns over a loss of government benefits due to earned wages,
which was identified by three respondents. One person explained, “The biggest barrier to long
term employment is the difficulty in managing SSI when students earn an income. Some parents
are worried that student SSI checks are affected by income.” Another parent-related comment
described low-expectations regarding employment by the family as well as over-assistance
leading to a lack of student independent living skills. Other comments related to barriers
described: difficulty finding partner employers, high costs of individualizing services, lack of
services post-program, student lack of ambition, and perceptions by employers that college
internships must be unpaid.

**Research question 2: Strategies to increase paid work experience opportunities.** The
survey instrument featured a list of 20 strategies that PSE personnel may use to facilitate paid
work experience opportunities for students in their program. For each item, respondents were
asked to identify how often they use the strategy by selecting one of the following options: *Never
Used, Rarely Used, Sometimes Used, Often Used, or Always Used.* A complete listing of
responses for each of the 20 items can be found in Table 9.

Table 9

*Strategies to Increase Paid Work Experience Opportunities for Students*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Never Used</th>
<th>Rarely Used</th>
<th>Sometimes Used</th>
<th>Often Used</th>
<th>Always Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilize existing employer networks (like Chamber of Commerce)</td>
<td>16.9%</td>
<td>16.9%</td>
<td>33.8%</td>
<td>13.8%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Negotiate the scope of the job with employers so that it benefits both the business and student</td>
<td>3.1%</td>
<td>6.2%</td>
<td>33.8%</td>
<td>13.8%</td>
<td>43.1%</td>
</tr>
<tr>
<td>Match student strengths with a position</td>
<td>3.1%</td>
<td>4.6%</td>
<td>20%</td>
<td>33.8%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Match student interests with their work experience position</td>
<td>3.1%</td>
<td>0%</td>
<td>6.2%</td>
<td>29.2%</td>
<td>46.2%</td>
</tr>
<tr>
<td>Activity</td>
<td>Percentage 1</td>
<td>Percentage 2</td>
<td>Percentage 3</td>
<td>Percentage 4</td>
<td>Percentage 5</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Provide students with an opportunity to relate what is learned in the workplace to what is learned in the instructional curriculum</td>
<td>3.1%</td>
<td>3.1%</td>
<td>13.8%</td>
<td>30.8%</td>
<td>35.4%</td>
</tr>
<tr>
<td>Involve family members</td>
<td>7.7%</td>
<td>3.1%</td>
<td>26.2%</td>
<td>21.5%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Work with Vocational Rehabilitation</td>
<td>10.8%</td>
<td>10.8%</td>
<td>20%</td>
<td>23.1%</td>
<td>21.5%</td>
</tr>
<tr>
<td>Work with employers who have had prior experiences with employees with disabilities</td>
<td>3.1%</td>
<td>4.6%</td>
<td>35.4%</td>
<td>36.9%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Approach employers with a charitable appeal</td>
<td>27.7%</td>
<td>13.8%</td>
<td>20%</td>
<td>20%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Utilize natural supports in the workplace</td>
<td>3.1%</td>
<td>3.1%</td>
<td>4.6%</td>
<td>40%</td>
<td>35.4%</td>
</tr>
<tr>
<td>Provide training to our staff on job development</td>
<td>7.7%</td>
<td>15.4%</td>
<td>20%</td>
<td>18.5%</td>
<td>23.1%</td>
</tr>
<tr>
<td>Train employers and co-workers to improve skills to better work with people with disabilities</td>
<td>10.8%</td>
<td>20%</td>
<td>20%</td>
<td>23.1%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Encourage businesses personnel to be involved with our program at our program site (not the job site)</td>
<td>21.5%</td>
<td>30.8%</td>
<td>27.7%</td>
<td>20%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Build a trusting relationship with the employer</td>
<td>3.1%</td>
<td>1.5%</td>
<td>4.6%</td>
<td>18.5%</td>
<td>58.5%</td>
</tr>
<tr>
<td>Use testimonials from businesses that have participated in the past</td>
<td>4.6%</td>
<td>9.2%</td>
<td>24.6%</td>
<td>23.1%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Solicit feedback from employer regarding the placement</td>
<td>3.1%</td>
<td>0%</td>
<td>7.7%</td>
<td>15.4%</td>
<td>60.0%</td>
</tr>
<tr>
<td>Suggest short-term trials with student workers</td>
<td>1.5%</td>
<td>12.3%</td>
<td>23.1%</td>
<td>33.8%</td>
<td>15.4%</td>
</tr>
<tr>
<td>Identify potential co-worker mentors in the workplace</td>
<td>7.7%</td>
<td>9.2%</td>
<td>16.9%</td>
<td>35.4%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Approach employers with information</td>
<td>7.7%</td>
<td>9.2%</td>
<td>12.3%</td>
<td>27.7%</td>
<td>29.2%</td>
</tr>
</tbody>
</table>
about how a placement can positively impact their bottom line

| Provide direct on-site training for the students in the workplace | 4.6% | 4.6% | 10.8% | 26.2% | 40% |

Note. n=65.

Five of the strategies included on the survey were identified by 40% or more respondents as ones that are *Always Used*. These include: *Solicit feedback from employer regarding the placement* (60%), *Build a trusting relationship with the employer* (58.5%), *Match student interests with their work experience position* (46.2%), *Negotiate the scope of the job with employers so that it benefits both the business and student* (43.1%), and *Provide direct on-site training for the students in the workplace* (40%). When the frequency of those who described strategies as *Often Used* is added to the *Always Used* responses, the strategy *Utilize natural supports in the workplace* has the second highest combined percent (75.4%) and *Provide students with an opportunity to relate what is learned in the workplace to what is learned in the instructional curriculum* was the fifth highest combined percentage (66.2%).

Few strategies were identified by a large number of respondents as *Never Used* when facilitating paid work opportunities for students in their PSE program. Five strategies were identified by more than 10% or respondents as being a strategy that is *Never Used*, including: *Approach employers with a charitable appeal* (27.7%), *Encourage businesses personnel to be involved with our program at our program site* (21.5%), *Utilize existing employer networks* (16.9%), *Train employers and co-workers to improve skills to better work with people with disabilities* (10.8%), and *Work with Vocational Rehabilitation* (10.8%).

In order to identify items not included on the list included in the survey, respondents were provided with an opportunity to describe other strategies they use to help facilitate paid work experience. While ten respondents included comments, only one described a strategy that was
not on the list. This individual described building relationships with people throughout the community to help promote work experiences for their students. Other responses provided additional information regarding their responses, including four participants who explained that they do not offer paid work experiences.

**Research question 3: Relationships between PSE program characteristics and perceived barriers to facilitating paid work experience.** Analysis of variance (ANOVA) was used to identify potential relationships between program characteristics and perceived barriers faced by those who facilitate paid work experiences for students in PSE programs. Responses for a total of 34 program characteristics were analyzed along with the 28 potential barriers identified in the survey.

Using an initial significance of \( p < .05 \), the ANOVAs produced a total of 51 statistically significant different relationships between variables. Due to the large number of ANOVAs completed for the analysis, the likelihood of spurious correlations was quite high. In order to reduce the likelihood of Type I error, the significance value was reduced to \( p < .01 \), which reduced the total number statistically significant relationships to ten items. Responses for these ten items were reviewed to identify patterns that could suggest relationships that could be by happenstance. Three items were identified as concerning due to the response patterns and are included in Appendix D. A review of these items shows the frequency of responses as being nonsensical. For example, when looking at the relationship between the characteristic of Program Funding- Scholarship and the barrier of Student Responsibility, there was almost no difference in responses for programs that had scholarships as No Contribution (\( \bar{x} = 1.47 \)) and those for which it is a Large Contributor (\( \bar{x} = 1.40 \)). This left seven relationships that had a \( p > .01 \) and included response patterns that did not cause concerns.
The remaining seven pairs of program characteristics and barriers that were identified by the ANOVA as having a relationship are described in Table 10. When looking at the program characteristic of *Type of institution of higher learning*, two barriers were identified as having a significant relationship through the ANOVA. These include *Employers unwillingness to work with individuals with disabilities*, $F(3, 55) = 4.87, p = .004$, and *Layoffs due to seasonal work*, $F(3, 55) = 4.43, p = .006$. Two barriers were identified by the ANOVA as having a significant relationship to the program characteristic *Program funding through federal student aid*. These include *Transportation issues*, $F(2, 57) = 6.43, p = .003$, and *Over-involvement of family members*, $F(2, 57) = 5.65, p = .006$. The barrier of *Students' poor hygiene* was identified by the ANOVA as having a significant relationship with the program characteristic of the *Extent to which increased independent living skills are an outcome goal*, $F(2, 59) = 5.30, p = .008$. The ANOVA identified a significant relationship between the barrier *Inadequate number of staff hours to support students in workplace* and the program characteristic of *Employment supports through VR*, $F(3, 55) = 5.50, p = .002$. Finally, a relationship was identified between the program characteristic *Student employment setting (individual paid in the community)* and *Lack of paid jobs in the area*, $F(2, 55) = 6.90, p = .002$.

Table 10

*ANOVA Barriers: Arranged by Program Characteristics*

<table>
<thead>
<tr>
<th>Program Characteristics and Barriers</th>
<th>Df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characteristic: Type of Institution of Higher Learning</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employers unwillingness to work with individuals with disabilities</td>
<td>3</td>
<td>4.87</td>
<td>.004</td>
</tr>
<tr>
<td>Layoffs due to seasonal work</td>
<td>3</td>
<td>4.43</td>
<td>.006</td>
</tr>
</tbody>
</table>
**Characteristic: Funding (Federal Student Aid)**

- Transportation issues: 2, 6.43, .003
- Over-involvement of family members: 2, 5.65, .006

**Characteristic: PSE Outcome Goal (Independent Living Skills)**

- Students' poor hygiene: 2, 5.30, .008

**Characteristic: Source of Employment Supports (Vocational Rehabilitation)**

- Inadequate number of staff hours to support students in workplace: 3, 5.50, .002

**Characteristic: Student Employment Setting (Individual Paid in the Community)**

- Lack of paid jobs in the area: 2, 6.90, .002

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**Bonferroni correction.** In order to reduce the likelihood of Type I errors, or false-positive results, the Bonferroni correction was used. This robust and conservative post-hoc test (Field, 2013) was run on the survey data. The findings showed statistical significance, therefore an assumption can be made that Type I errors were probable. In other words, there is a probability of detecting significant results that are false. In this case, the ANOVAs showed statistically significant results with multiple relationships (see Table 10), but one cannot make an assumption that they are positive results as a possible Type 1 error was found. Therefore, the reader should be cautioned when making any assumptions regarding the ANOVA results as the null hypothesis was not rejected (i.e., there are no differences among groups).

**Qualitative Interviews**

Individuals who completed the survey were asked to identify if they would be available
to engage in a follow-up interview. Forty-eight respondents identified themselves as being willing to be interviewed to further explore the results of the survey. Interviewees were purposefully selected in order to provide a diverse sample, with particular attention paid to representing the varied regions of the United States as well as different types of institutions of higher education (e.g., college, university, community college, vocational school). In addition, the responses of potential interviewees were reviewed to ensure that there was within sample variance (i.e. the respondent did not provide the same answer for a large number of survey items) and the individual had responded to each item of the survey. Information about the interviewees is included in Table 11.

Table 11

*Interviewee Program Characteristics*

<table>
<thead>
<tr>
<th>Region</th>
<th>Type of Institution of Higher Learning</th>
<th>Works with Vocational Rehabilitation?</th>
<th>Comprehensive Transition Program?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific</td>
<td>University</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>New England</td>
<td>University</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>University</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>West South Central</td>
<td>University</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Middle Atlantic</td>
<td>College</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Middle Atlantic</td>
<td>University</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>University</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Pacific</td>
<td>Community College</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>West North Central</td>
<td>University</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>East South Central</td>
<td>State PSE Hub</td>
<td>Yes</td>
<td>Yes/No (Multiple Programs)</td>
</tr>
</tbody>
</table>
Note. Regions based on US Census Regions and Divisions (U.S. Census Bureau, n.d.)

Research Question 1: Barriers and non-barriers to work experience. Interviewees were presented (aurally and visually) with the most frequently identified barriers to paid work experiences, as identified by the survey. The barriers include: transportation issues, employer perceptions of the abilities of people with disabilities, finding time in the student’s schedule, inadequate number of staff hours to support students in the workplace (see Figure 2). Each interviewee was asked the following questions, relating to barriers:

1. Does anything on this list surprise you?
2. What other barriers do you feel are the most significant for your program?
3. Several people identified concerns regarding loss of benefits as an additional barrier. Do you find that to be the case?

A thematic map describing the themes can be found in Figure 2. Nine of the interviewees expressed general agreement with these barriers. Responses representative of the group included: "Those are all true for us as well", "No, none of it surprises me at all," and "We've encountered all of them. We just try to knock them down as much as we can".

Transportation issues. While there was overwhelming agreement amongst interviewees that the list of barriers was accurate, responses describing transportation issues were mixed. One participant shared an anecdote describing the struggles of transportation-related issues for PSE programs. The interviewee described a student who was interested in working in the health care field. "He had a job ready for him, the employer was ready to hire him, but we just could not find a way to get him to work. So, by the time that was figured out, the job was gone."

Transportation barriers may be more of an issue for programs in more rural settings.
Figure 2. Thematic map: Barriers. This is a thematic map displaying responses related to barriers faced by PSE staff when facilitating paid work experience. The main themes are represented by the shaded boxes, while the sub-themes are represented in boxes without shading.
Three interviewees specifically noted that this may be the case. One interviewee said, "Once you get outside [the city], our state is a pretty expansive rural area, and transportation is an issue." Other interviewees provided a variety of responses explaining why transportation-related issues were not a barrier for their specific program.

Recognizing that getting students to and from a work site can be challenging, one interviewee who works in an urban environment described making efforts to find work experience placements within walking distance from the campus. Two participants explained that they were able to manage this barrier by utilizing public transportation. Three interviewees described transportation as being provided by partner sources, such as developmental disability support organizations, state-sponsored supports, and the local school district. However, one interviewee explained that some of these sources may not provide reliable transportation. This frustration was described as such: “You have to be [at work] at a certain time and when you are at the whim and fancy of a transit service or Medicaid provider, they don’t often see the urgency of getting you where you need to be or showing up.”

**Employer perceptions of the abilities of people with disabilities.** One of the barriers identified with a high frequency by survey respondents as hindering their ability to find paid work experiences for students involves the perceptions of employers regarding the abilities of individuals with disabilities. While interviewees generally agreed with this along with the other frequently identified barriers, they did not specifically describe this as a barrier for their program. One participant, who has most students involved with unpaid internships explained that while he did not find this to be a barrier, "if they were to be paid, it might have been a little more difficult.” Another interviewee noted that because the program seeks time-limited work experiences, he feels employers may be more willing to provide opportunities for students,
regardless of their perceptions. One interviewee spoke about the inclusive-nature of their region, which they felt translated well towards finding work experience opportunities for students. This individual said, "We have a very accepting community in general. We have a sort of 'the more the merrier' feel. Everyone is family. That is really the attitude of most employers of our students in general."

**Finding time in the student’s schedule.** While interviewees generally agreed to the complete list of potential barriers for PSE programs to facilitate paid work experiences, none of the five who spoke directly about that lack of time in a student's schedule described this specific concern as an issue in their program. These participants generally described employment as a priority, and as such were able to develop student schedules around work experience. One explained, "We try to work around that as best we can because our program is a career preparedness program and we don't want to hinder their careers". Another interviewee said, "We try to put the vocational training internship as primary and then there are other things they can do to work around that." It may be also possible to enlist the help of employers to manage this potential barrier. One participant explained, "Employers on-campus work with us to accommodate student schedules and value any level of work students are capable of."

**Inadequate number of staff hours to support students in the workplace.** While interviewees generally agreed to the complete list of the four commonly identified barriers, specific responses did not indicate that staffing was an issue for facilitating paid work experiences for students. One interviewee said that it is the responsibility of the employer to provide staffing. Another explained their program intentionally limits on-site staffing in order to increase the potential for long-term sustainability. This interviewee said, “What we have done for most of our students when they start the internship is we might provide some support
initially, but we really want them to have more natural supports through that internship.” In order to ease the burden of staffing students at the job site, two interviewees discussed using peer mentors as support personnel. When asked if they felt the program had a sufficient number of peers to provide the supports needed by the PSE students, one interviewee responded, “Oh yeah, we have mentors and then a back-up set of mentors who are there in case one can’t show up.”

“Other” response: Loss of benefits as a barrier to finding paid work experiences. The fear of parents or students losing disability-related benefits as a result of engaging in paid work experience for students was identified as a barrier by several respondents in the survey (as an “other” barrier not included on the survey). Five participants agreed that this is a barrier for some students and families in their program. In fact, one interviewee identified this as a primary reason why their program only offers unpaid internships to students. Other interviewees discussed connecting students and families with benefits specialists in order to gain a better understanding of how receiving wages might impact their benefits. One participant explained that the fear of losing benefits is more pronounced if the family has faced this issue in the past. This interviewee described individuals and families in the situation saying "I'm not crossing that bridge again. I will choose not to have a job over taking a chance of losing my benefits".

Three interviewees, however, explained that fear of losing benefits is not a barrier to finding paid work experiences for students in their PSE program. One interviewee explained that this is the case because the program has a goal of finding paid employment, which is made clear to families before a student is admitted. Another interviewee explained benefits-related issues arise post-program graduation. This individual said, "There's been much more hesitation to find work, which is the opposite of what is supposed to happen as the outcomes of these programs. But, that's how the family made the choice, at least for now."
Research question 2: Strategies to increase work experience opportunities.

Interviewees were presented, both aurally and visually, with a list of the strategies that were frequently identified as being used by survey respondents to facilitate paid work experience. These included: (a) solicit feedback from employer regarding the placement, (b) build a trusting relationship with the employer, (c) match student interests with their work experience position, (d) negotiate the scope of the job with employers so that it benefits both the business and student, (e) provide direct on-site training for the students in the workplace, (f) utilize natural supports in the workplace, and (g) provide students with an opportunity to relate what is learned in the workplace to what is learned in the instructional curriculum. In order to better understand the value of these strategies, interviewees were asked the following questions related to the quantitative findings:

1. Does anything on this list surprise you?

2. What other strategies do you feel are the most useful for your program?

A thematic map describing the themes resulting from the qualitative analysis is included in Figure 3.

Seven of the ten interviewees presented statements that expressed general agreement with these being effective strategies to increase opportunities for paid work experience for students. Interviewees made comments such as, “those are all right on”, and, “that’s what we do”. Other participants described agreement and disagreement with various items from the quantitative findings (described next). One respondent generally agreed that while these strategies are known to be effective for facilitating work experience, “I guess really two or three of them are ones that we’ve actually used, not necessarily with any specific intention.”

Because the interviews were generally focused on strategies identified through the
Figure 3. Thematic map: Strategies. This is a thematic map displaying responses strategies used by PSE staff when facilitating paid work experiences. The main themes are represented by the shaded boxes, while the sub-themes are represented in boxes without shading.
quantitative research, the themes that emerged through data analysis were closely related to these items. Two of these items (*Solicit feedback from employer regarding the placement* and *Build a trusting relationship with the employer*) were only directly discussed by one interviewee and as such were not included below as themes. The strategy *Negotiate the scope of the job with employers so that it benefits both the business and student* was not directly discussed by any interviewee and as such was also not included as a theme.

**Match student interests with their work experience position.** Interviewees discussed the importance of ensuring that job placements were made with the student interests in mind. One participant explained, “Everything we do here is focused on person-centered planning, so we work heavily on their interests and try to match them in those. We find that extremely important.” Another interviewee explained that when a program is able to match student interests with a work experience, “they are more apt to stay longer at those jobs than if we went out and said ‘here’s your job, it’s next on the list, you’re next on the list, we’re going to put you in that job.’” Job matching seemed to continue even after a work experience has ended. One interviewee explained that in order to guide future work experiences, students are asked questions such as *is it the job you thought it would be?* and *would you be happy here?* with the purpose being that “sometimes perception is actually not what it might be”.

However, one interviewee explained that although the literature strongly supports the notion of matching a work experience with the interests of the student, this is not a primary factor when placements are arranged. This individual explained that while there is value in considering student interests, it may be more beneficial to evaluate the specific job skills the student is lacking in order to be competitively employed. These skills may not be targeted in a placement that matches their direct interests and as such placements are more based on the needs
assessment. This interviewee provided an example of a student who might not want to work in retail, “but the best way to develop eye contact is by having a lot of eye contact with people and that’s going to be in retail. We build your skills in retail even though you really want to work in a sports arena or something.”

**Provide direct on-site training for the students in the workplace.** Interviewees described how supporting students at the job site increases the comfort of the employers. One explained that employers recognize that there are many basic workplace skills the students will need to learn because it is likely the first job they have had. This interviewee explained that they “teach [students] how to clock in and hot to do the tasks, and teach them how to use the natural supports there in the job. And then we kind of back out so we’re not just hanging around.” Another interviewee discussed misconceptions the employers might have about the amount of training the student will require and how offering supports might ease these concerns. This individual said that by offering time-limited supports on the job site, “[employers] seem to be able to not be so nervous about it and more willing to say ‘yes.’”

**Utilize natural supports in the workplace.** One of the roles of PSE staff to increase the potential for successful paid work experiences involved the identification of natural supports. Interviewees directly addressed this responsibility as a means of on-site support. One explained that employers might not consider the types of natural supports used by all employees in their job. They continued by saying, “we help them identify what those [natural supports] are and then we show them how that can pertain to the individuals that we are trying to work with.”

**Provide students with an opportunity to relate what is learned in the workplace to what is learned in the instructional curriculum.** To supplement work experiences at the job site, interviewees discussed the importance of working on employability skills in the classroom. One
described an employment class offered to students in the PSE program. “Career exploration, employment obtainment, and then succeeding in the workplace, so we try very hard to tie the classroom to the real-world experience. That’s a really big one for us.”

**Research question 3: Relationships between program characteristics and barriers faced when facilitating paid work experience for students.** Interviewees were asked about relationships identified in the quantitative survey as having statistically significant differences in responses. Prior to each interview, participants were emailed tables outlining the means and standard deviation for each of the relationships identified by the ANOVA. This allowed them to engage with the data both visually and aurally.

**Relationship: “Type of institution of higher learning” (characteristic) and “employers’ unwillingness to work with individuals with disabilities” (barrier).** While several interviewees were not able to make sense of this relationship, others focused on exploring whether the type of institution with which the PSE program was affiliated made a difference in employer willingness to provide a placement. Two interviewees felt that their affiliation with a college or university helped when procuring work experience. One said, “It definitely opens some doors, for sure, that might not have been otherwise opened.” However, an equal number of participants explicitly stated that an affiliation did not make a difference. An interviewee said, more than the affiliation with the university, employers participate because “it’s more about just about being part of the community.” Others were surprised that programs affiliated with vocational schools viewed employer unwillingness to work with individuals with disabilities as a more pronounced barrier. One of these interviewees said, “I was surprised to see the numbers higher at vocational schools, and maybe that’s because their sheer focus is on employment.”

**Relationship: “Type of institution of higher learning” (characteristic) and “layoffs due
to seasonal work” (barrier). While interviewees generally struggled to make sense of this relationship, several did provide responses that were foundationally similar. Four interviewees speculated that those who worked for programs affiliated with vocational schools may see seasonal layoffs as a more significant barrier because of the nature of jobs associated with a vocational school. One person explained, “And I see that because when we look at some of the programs that are vo-tech program, some of it can be weather-related…I guess it might simply be the types of careers that they are serving their students with.”

Relationship: “Program funding through federal student aid” (characteristic) and “transportation issues” (barrier). Interviewees were generally in agreement that this relationship makes little sense. Two interviewees speculated that there may be an indirect cause relating to the fact that programs that receive funding through student financial aid (Comprehensive Transition Programs) may be generally larger in size. One of these interviewees speculated, “I wonder if it’s these smaller places that aren’t getting the federal student aid, [transportation is] not as much of an issue because they’re in a smaller place.”

Relationship: “Program funding through federal student aid” (characteristic) and “over-involvement of family members” (barrier). Interviewees struggled to explain this relationship. While several agreed that over-involvement of family members is a significant barrier, there was no consensus as to how this may be related to program funding through federal financial aid.

Relationship: “PSE outcome goal - independent living skills” (characteristic) and “students' poor hygiene” (barrier). This relationship baffled most of the interviewees. However, two participants wondered if this relationship is simply because programs that focus on independent living skills may be more aware of poor hygiene as a potential barrier to finding
paid work experiences. One of these interviewees wondered, “Is it just a matter of that’s what in your sight and that’s what you’re thinking about? If you have this big goal of independent living skills, is that’s what you’re focused on?”

*Relationship: “Source of employment supports- vocational rehabilitation” (characteristic) and “students’ poor hygiene” (barrier).* Interviewees were not able to explain how these two factors may be related.

*Relationship: “Student employment setting - individual paid in the community” (characteristic) and “lack of paid jobs in the area” (barrier).* While some interviewees were unable to make sense of this relationship, with four participants commenting relating to perspective as being the underlying cause. These participants wondered that if one is successful in finding paid work experience for students, then this individual might view the *lack of paid jobs in the area* as less of a barrier. One interviewee talked about the impact of initial success in finding additional paid jobs. “The first one is hard and then it’s easier after that. I could see that once you’ve got a group of students in paid positions that you would see the lack of a paid jobs as less of an issue.” Another explained the relationship as an internal barrier in itself. This individual explained, “so people think we’re never going to get a paid job so we’re just going to focus on unpaid jobs or unpaid internships or opportunities. You have to make the commitment internally… it changes who you ask and how.”

**Meta-Inference**

MM research involves both qualitative and quantitative research elements followed by a *meta-inference process* to integrate the results of both research components, examining the main research questions in a holistic manner.

**Research question 1: Barriers and non-barriers to work experience.** Four common
barriers to facilitating paid work experiences were identified through the survey administered in the first phase of this research. While the interview phase of this study produced varying levels of confirmation of the extent of these barriers, interviewees were generally in agreement that these four barriers are ones commonly encountered by PSE staff when facilitating paid work experience.

**Research question 2: Strategies to increase work experience opportunities.** Seven common strategies used by PSE staff when facilitating paid work experiences were identified through the survey administered in the first phase of this study. While the interview phase produced varying levels of confirmation of the extent of the use of these barriers, interviewees were generally in agreement that these seven strategies were ones commonly used by PSE staff when facilitating paid work experience.

**Research question 3: Relationships between program characteristics and barriers faced when facilitating paid work experience for students.** Seven relationships between PSE program characteristics and barriers to facilitating paid work experiences were identified as being statistically significant through the quantitative phase of the study. However, the use of the Bonferroni correction identified a strong likelihood for Type I error. When these relationships were discussed with PSE program staff in the qualitative phase of the study, the interviewees, as a group, were unable to support the existence of these relationships. However, interviewees provided sufficient support to suggest that success in finding paid work experiences may lead to a more positive outlook regarding the availability of paid work experiences for students.
CHAPTER FIVE
DISCUSSION

This study explored post-secondary education (PSE) programs serving students with intellectual disabilities (ID) and the facilitation of work experience opportunities for these individuals. More specifically, this study sought to explore the perspectives of PSE staff members regarding common barriers to finding paid work experience for students, as well as strategies used to facilitate paid work experiences for students in PSE programs. In addition, the study involved exploring the extent to which certain program characteristics are related to specific barriers to paid work experience faced by staff who manage this component of PSE programs. The following sections present a discussion of the results and meta-inferences made, including general employment training in PSE programs and each of the three research questions. Additionally, a discussion involving the implications and limitations of this study, as well as recommendations for future research are presented.

Employment and PSE Programs

Survey results provided positive information regarding employment training for students enrolled in PSE programs. More so than any other outcome goal, PSE staff who completed the survey saw improved employment outcomes as a primary goal of their program. This is consistent with information found in previous studies (Grigal, Hart, & Weir, 2012; Papay & Bambara, 2011). Especially encouraging is the high level of confidence PSE staff have that students in their program will be able to sustain paid employment after completing the program. In addition, PSE staff indicate generally positive information regarding employer willingness to provide work experience opportunities for students. Even when employers have previously had a poor experience with a student in the program, most PSE staff feel that employers are open to
trying again with another student. This is well-aligned with previous literature detailing the positive impact working with an individual with a disability has on employer perceptions (Copeland, Chan, Bezyak, & Fraser, 2010; Hernandez et al., 2008; Morgan & Alexander, 2005).

Only 3% of PSE staff who completed the survey described most of their students as working in sheltered work environment (i.e. a workplace in which all or most co-workers have disabilities). Work experience positions offered by PSE programs reflect the increased emphasis on integrated employment opportunities for individuals with disabilities, like those supported by initiatives such as Employment First (ODEP, n.d.). While there are few students in PSE programs working in sheltered settings, there are also low numbers of students engaged in paid work experience. Even though paid work experience is considered a benchmark for career development activities for students enrolled in PSE programs (Grigal, Hart, & Weir, 2011), only 3% of programs in this study identified employment services in which all students were engaged in paid work experiences.

Nearly two-thirds of survey respondents identified their program as one that works with Vocational Rehabilitation (VR). Those programs that work with VR are generally satisfied with their partnership. While there were varying levels of agreement for each item related to VR services, the majority of respondents either agreed or strongly agreed with each statement. The notion of PSE programs collaborating with VR has been supported in previous literature (Grigal et al., 2015; Petcu, Chezan, & Van Horn, 2015; Sheppard-Jones, Reilly, & Jones, 2013).

Collaborating with VR is important as it can provide additional employment-related supports to students in PSE programs (Sheppard-Jones, et al., 2013). Building these partnerships may be especially useful because over 80% of respondents either agreed or strongly agreed that students will access these services after they have completed the PSE program.
Research Question 1: Barriers to paid work experience

Quantitative and qualitative methods were used to identify barriers to facilitating paid work experience for students enrolled in PSE programs for individuals with ID. Based on both quantitative and qualitative results, a meta-inference was developed in order to better understand the overall impact of this study. The following sections describe barriers that were identified as commonly occurring as well as barriers that were identified as occurring less frequently in this study.

Barriers frequently identified through the survey. Survey respondents were provided with 28 potential barriers that PSE staff may face when facilitating paid work experience opportunities for students in their programs. This list of potential barriers was identified through a review of the literature. The following are barriers that were frequently identified by respondents: transportation issues, employer perceptions of the abilities of people with disabilities, inadequate number of staff hours to support students in the workplace, and finding time in the student’s schedule. Interviewees were presented with this list and while they generally agreed that these are common barriers faced by PSE program staff when facilitating work experience, responses regarding specific items were inconsistent.

Of these items, transportation issues was the most frequently identified barrier to facilitating paid work experience by survey respondents. This is not surprising, as transportation-related barriers have been identified in previous literature, including Grigal and Dwyre (2010) and Petcu et al. (2015). The latter of these studies identified transportation in PSE programs as one of the more significant “challenges encountered in preparing students with IDD for competitive employment” (p. 369). Other works have mentioned transportation-related issues in
other contexts, including involving getting the student to school or to social events (Dwyre, Grigal, & Fialka, 2010; Grigal et al., 2015).

_Employer perceptions of the abilities of people with disabilities_ was also identified as a frequently identified barrier to paid work experience for students in PSE programs. While interviewees did not provide specific examples of negative views of workers with disabilities, previous literature describes common concerns held by employers regarding individuals with disabilities working in their place of business. These include: the need for accommodations (Domzal, Houtenville, & Sharma, 2008; Hernandez et al., 2008; Houtenville & Kalargyou, 2012; Jasper & Waldhard, 2012; Kaye, Jans, & Jones, 2011; Lengnick-Hall, Gaunt, & Kulkarni, 2008; Lindsay, Robinson, Mcdougall, Sanford, & Adams, 2012), assumptions of low productivity or an employee’s inability to complete requisite job tasks (Domzal et al., 2008; Hernandez et al., 2008; Houtenville & Kalargyou, 2012; Lengnick-Hall et al., 2008; Lindsay et al., 2012; Kaye et al., 2011), workplace safety (Hernandez et al., 2008; Houtenville & Kalargy, 2012), legal concerns (Hernandez et al., 2008; Lengnick-Hall et al., 2008), high rate of absenteeism (Hernandez et al., 2008), and a negative impact on co-workers and customers (Lengnick-Hall et al., 2008). Being aware of these potential negative perceptions will help PSE staff alleviate these concerns as they support employers providing work experience opportunities.

Another commonly identified barrier to paid work experience for students in PSE programs involves _inadequate number of staff hours to support students in the workplace_. This barrier was also identified in the study conducted by Petcu et al. (2015), which also used a survey of PSE staff to identify employment-related challenges. While interviewees in this study agreed that low staff hours is a significant barrier, they did not provide comments to support this notion. Many of the comments echoed the recommendation made by Grigal and Dwyre (2010),
who suggest that PSE programs allocate sufficient and flexible staffing to support students who are engaged in work experiences.

A fourth item frequently identified in the survey as a barrier to facilitating paid work experience was *finding time in the student’s schedule*. The difficulty of balancing academics and vocational training was also identified as a challenge in Grigal and Dwyre’s (2010) study of PSE and employment training. As a result, the authors explained that successful programs “[set] paid employment as a goal” and provided “flexible student schedules” (p. 3). Comments from interviewees in this study reflected these practices, which explains why these interviewees did not see this a barrier for their program.

**Additional findings relating to barriers.** In addition to the items that were identified as common barriers, findings from other survey items are of value. These items were not discussed in the qualitative interviews and as such were only explored using survey data (see *limitations* for more information).

**Business-related barriers.** Several business-related barriers to finding work opportunities for students in PSE programs that were identified in the literature were not as present in the results of this survey. While Petcu et al. (2015) found that the lack of available jobs was a challenge for finding employment opportunities for students in PSE programs, respondents in this survey generally did not see this as being the case. Nearly three-quarters of survey respondents identified *lack of paid jobs in the area* as not a barrier or a small barrier. A slightly lower percentage of PSE staff identified *limited number of weekly available hours offered by employer* as not a barrier or a small barrier. It is encouraging that PSE staff generally felt that the job opportunities are available to the students with ID enrolled in their program.
Grigal and Dwyre (2010) identified additional business-related challenges as involving changes in management and layoffs due to seasonal work. However, survey respondents in this study described these barriers as being less critical. Over three-quarters of respondents identified each of these items as *not a barrier* or a *small barrier*.

**Barriers relating to PSE programs.** Internal barriers to facilitating paid work experience for students enrolled in PSE programs were described by Grigal and Hart (2010). These include a lack of PSE staff training regarding integrated employment, customized employment, and job development. Respondents in this survey generally felt like their staff was well-trained. Over three-quarters of respondents felt that each of these items were either *not a barrier* or a *small barrier*. This is perhaps reflective of an increased emphasis on supporting competitive employment outcomes for individuals with disabilities.

**Student-related barriers.** Petcu et al. (2015) found factors relating directly to the students in the PSE program as impacting employability, including “skill level, motivation, responsibility and accountability, difficulty in identifying realistic employment goals, problem behavior, and attendance to work” (p. 369). However, survey respondents in this study generally had more positive views of the views of their students. The overwhelming majority PSE staff who completed the survey in this study found each of these items to be either *not a barrier* or a *small barrier*.

Other barriers related to student preparation were identified by Grigal and Hart (2010). These items are less about student characteristics, but rather involve low levels of pre-program employability training and vocational assessments. While survey respondents in this survey identified these as more of a barrier than the aforementioned student characteristics described by Petcu et al. (2015), most identified these items as either *not a barrier* or a *small barrier*. 
Meta-inference for research question 1: Barriers to paid work experience. Data collected through the survey and subsequent quantitative analysis identified the following as the most common barriers to facilitating paid work experience for student enrolled in PSE programs: transportation issues, employer perceptions of the abilities of people with disabilities, inadequate number of staff hours to support students in the workplace, and finding time in the student’s schedule. Interviewees, from the qualitative strand of the study, were asked about this collective list of barriers, and nearly each agreed that these were common barriers when facilitating paid work experience. However, few interviewees provided specific information regarding these items in the subsequent discussion, with some explaining how these items were not a barrier for their particular program. Because these items were frequently identified in the survey as significant barriers and interviewees generally agreed to the list, this study supports the notion that these are the most common barriers faced by PSE programs when facilitating paid work experiences.

Research Question 2: Strategies to Increase Paid Work Experience Opportunities.

Quantitative and qualitative methods were utilized to better understand strategies used by PSE staff to procure paid work experiences for students with ID in their program. Descriptions of these strategies are included below and presented with connections to previous literature. Through a sequential mixed-methods design, the results were analyzed to make in-depth meta-inferences from the findings.

Strategies frequently identified in the survey. The survey instrument listed 20 strategies and asked respondents to identify the extent to which the PSE program uses each when facilitating paid work experience for students with ID. Strategies most frequently identified by respondents included: (a) solicit feedback from employer regarding the placement, (b) build a
trusting relationship with the employer, (c) match student interests with their work experience position, (d) negotiate the scope of the job with employers so that it benefits both the business and student, (e) provide direct on-site training for the students in the workplace, (f) utilize natural supports in the workplace, and (g) provide students with an opportunity to relate what is learned in the workplace to what is learned in the instructional curriculum. Interviewees generally agreed to this list as strategies that are used often by PSE staff when facilitating work experiences for students with ID.

The strategies included on this list are not surprising, given that they are supported in literature written to provide guidance to PSE program staff, as well as other professionals tasked with supporting work experiences for individuals with disabilities. Using strategies that involve direct support to employers, including soliciting feedback, building a relationship, and providing on-site training are well-documented in existing literature (Gustaffson et al., 2013; Grossi et al., 2001; Grossi et al., 2014; Lewis et al., 2011; Luecking, 2009; National Collaborative on Workforce and Disability, 2005). These types of employer-specific supports are also presented in literature involving the context of PSE programs specifically (Grigal & Hart, 2010; Luecking, 2010; Sheppard-Jones et al., 2013).

The practice of job matching is also something that is present in the literature. The importance of matching at student with a job that is well-aligned with his or her interests has been recommended for those who work with students in PSE programs (Grigal et al., 2011; Grigal & Dwyre, 2010; Luecking, 2010) as well individuals in general work experience offerings (Lewis et al., 2011; Luecking, 2009; National Collaborative on Workforce and Disability, 2005).

Negotiating the scope of a job so that it benefits both the employer and the employee is the core of the practice known as job customization (Wehman & Brooke, 2013). Engaging in this
practice to support employment for individuals with disabilities is well-documented in the literature (Griffin, Hammis, Geary, & Sullivan, 2008; Grossi et al., 2014; Wehman & Brooke, 2013). Luecking (2010) discusses the importance of job customization in the context of PSE. Rather than talking with potential employers with a charitable appeal, informational interviewing (as part of job customization) allows PSE staff to help employers see how students can help their bottom line.

Natural supports refer to assistance that an employee may receive to help the individual be successful in the workplace (Wehman & Brooke, 2013). While almost all employees rely on natural supports from co-workers in the workplace, these are especially important for individuals with disabilities (Wehman & Brooke, 2013). Luecking (2010) and Sheppard-Jones et al. (2013) also discussed the importance of developing natural supports to help students enrolled in PSE programs be successful in the workplace.

Work experience is just one component of a well-designed PSE program for students with ID (Grigal et al., 2015; Grigal et al., 2011). Students enrolled in PSE programs may be engaged in inclusive classes or specialized classes designed specifically for students enrolled in PSE programs (Grigal et al., 2015). Previous literature and the results of this study support the practice of providing students with an opportunity to connect the workplace and classroom (Luecking, 2010).

Additional findings related to strategies. Items that survey respondents identified as strategies that are not often used are also important part of this discussion. For example, over half of PSE staff either do not or rarely encourage employers to be involved with the program at the school site (as opposed to only at the job site). Inviting employers to the school site may build stronger relationships to increase sustainability of the partnership as well as expand employer
understanding of the extent to which of individuals with disabilities can be effective in the work place (Scheef, Barrio, & Poppen, 2016). In addition, a relatively low number of respondents identified *utilize existing employer networks (like Chamber of Commerce)* as a strategy they use to find paid work experiences for students. Many employer networks view part of their missions as assisting youth seeking employment (Carter et al., 2009). As such, PSE program personnel may consider tapping into these resources, especially if they represent programs that support students aged 18-21.

**Meta-inference for research question 2: Strategies to facilitating paid work experiences.** As both the qualitative and quantitative measures suggest that these items are the most commonly used strategies for facilitating paid work experiences by PSE program personnel, the meta-inference supports that these are commonly-used practices.

The sequential mixed methods design featured quantitative methods (survey) followed by qualitative methods (interviews) to explore strategies used by PSE program staff to facilitate paid work experiences for student with ID enrolled in their program. Meta-inferences were made from the findings showing the most commonly used strategies for facilitating paid work experiences by PSE programs include: (a) *solicit feedback from employer regarding the placement*, (b) *build a trusting relationship with the employer*, (c) *match student interests with their work experience position*, (d) *negotiate the scope of the job with employers so that it benefits both the business and student*, (e) *provide direct on-site training for the students in the workplace*, (f) *utilize natural supports in the workplace*, and (g) *provide students with an opportunity to relate what is learned in the workplace to what is learned in the instructional curriculum*. Although survey respondents and interviewees generally agreed to this list as the most effective when facilitating paid work experiences, interviewees failed to comment on each of these items. This is perhaps
because interviewees were asked to comment on the list as a whole, rather than each individual item (see *limitations*). Therefore, it is difficult to make clear meta-inferences other than the ones already stated. Understanding strategies to facilitating paid work experiences is important to help guide PSE staff when working with employers to provide opportunities for students. PSE staff are reliant on the support of employers to provide these experiences and as such being familiar with effective strategies to facilitate work experiences is especially important.

**Research Question 3: Relationships Between PSE Program Characteristics and Perceived Barriers to Facilitating Paid Work Experience**

This study also sought to identify potential relationships between certain PSE program characteristics and barriers faced when facilitating paid work experience for students with ID. Identifying these relationships would be especially useful for program development, especially for schools looking to initiate a new PSE program. As programs have great variance in their characteristics (Grigal et al., 2012; Papay & Bambara, 2011), understanding potential barriers could help guide decisions regarding career development activities for students.

Quantitative findings from the statistical analysis of survey data identified potential relationships between PSE program characteristics and barriers faced when facilitating paid work experiences for students with ID. Post-hoc analyses for these relationships suggest that Type 1 errors may exist for each, suggesting that these relationships are capricious. Moreover, data collection through qualitative interviews with PSE program personnel further support that these relationships are, in fact, likely not genuine.

**Meta-inference for research question 3: Relationships between PSE program characteristics and perceived barriers to facilitating paid work experience.**
Neither the quantitative or qualitative measures support the notion that relationships exist between the program characteristics included in this survey and barriers faced to facilitating paid work experience. Perhaps the most noteworthy piece of information gleaned from this research question involves the perception of those who are able to procure paid work experiences for their students. PSE staff who are able to find paid work experiences for their students may see the lack of available jobs as less of a barrier. This suggests that those who find paid jobs for students may have more confidence in their ability to do so. While this may seem not surprising, it may be encouraging for PSE staff who have been unable to find paid work experience to know that finding jobs for students may make it easier to find subsequent positions for other students.

**Implications**

This study explored barriers and strategies associated with facilitating work experience opportunities for individuals enrolled in PSE programs serving students with ID. Work experience is a key component of career development activities for individuals with ID, and as such an essential piece of a program designed to increase employability for students in PSE programs (Grigal et al., 2011).

First, being aware of potential barriers to facilitating paid work experience will help PSE staff develop appropriate program components to better serve students. While this is valuable information for existing programs, it may especially useful to individuals interested in creating new programs on campuses around the country. Knowing these potential barriers may provide PSE staff with guidance as they explore the local job landscape.

Second, being knowledgable about strategies used to help facilitate paid work experience for students in PSE programs can help guide decisions for those tasked with providing students with such opportunities. Those who currently work in PSE programs may use this information to
evaluate how these opportunities are procured. In addition, those looking to build PSE programs, or add a work experience component to an existing PSE program, may consider using these strategies from the start. Knowing what has worked well for others may be a good place to start.

Third, it is important for people who facilitate career development activities for students enrolled in PSE programs for individuals with ID to understand that it is possible to procure paid work experiences for students. Results suggest that people generally feel that paid job experiences exist. In addition, it may be that finding paid work experiences for students may lead to increased confidence in one’s ability to procure these positions. Unless there are other mitigating factors (e.g. university policy), PSE program staff should seek work experiences that offer a wage for students enrolled in their programs.

Fourth, building relationships with employers may lead to more opportunities for students. Employers are willing to offer work experience positions, often times even if they have had a poor experience with a previous student. Supporting employers and maintaining these relationships may provide experiences now and in the future. This support might not directly involve working with the student in the workplace, but rather identifying natural supports in the workplace that can benefit both the employer and employee. Understanding the needs and comfort level of the employer will help guide decisions on how to best support the student at the work site. PSE program staff may also consider strengthening these relationships by inviting employers to visit the programs on-campus.

Lastly, PSE program staff should consider working with VR to support work experiences for students enrolled in their program. Those in this study who identified themselves as working with VR generally described positive experiences with this relationship. PSE programs that have not had success working with VR in the past may want to re-explore the viability of the
partnership. Recent changes in VR policy through the Workforce Innovation and Opportunity Act (2014) may have increased the availability of VR supports, especially for PSE programs that serve students age 18-21 in conjunction with public schools.

Limitations

When considering findings from this study, certain limitations must be considered. While measures have been taken to create a rigorous design, there are certain limitations that must be considered when interpreting the results. In addition, considering limitations regarding the results of this particular study may be especially important due to the wide variance of PSE program design, the generally low numbers of PSE programs in existence, and small sample size.

Quantitative limitations. The survey component of the study represents only the perspectives of the individuals who completed the survey. While this is a substantial sample of the population of PSE program personnel who facilitate work experiences for students in their program, it is not necessarily an accurate representation of the population due to wide variance in program design.

Missing survey data must also be considered. Perhaps due to the length of the survey, more respondents completed the items involving barriers than for those involving strategies. It is important to note that the data for strategies represent a smaller portion of the population than the data representing identified barriers. While this did not impact the ANOVA, which only involved program characteristics and barriers, the use of pairwise deletion may have influenced the comparison of means. While the sample size for items included in the ANOVA were close, they were not exactly the same, which may have lead to unintended variance.

The ANOVA for Research Question 3 is also the source of a significant limitation. The group sizes for the factors used in the ANOVA were not equal; in fact, some of these
relationships had very large variation in the group sizes. When group sizes are considerably different, an ANOVA assumption has been violated and results should considered with caution (Coladarci, Cobb, Minium, & Clarke, 2011). For example, one program characteristic involved the type of institution of higher learning. Survey respondents represented approximately 37 universities, 13 community colleges, 5 vocational schools, and 4 colleges.

Another potential limitation was the exclusion of certain program characteristics in the survey. Responses provided by interviewees included information about the size of the institution of higher education (i.e., number of students enrolled in the IHE) or the setting of the program (e.g., urban, rural, suburban). Having this information may have lead to the identification of barriers related to these program characteristics. For example, several interviewees identified program setting as a variable that may potentially impact the availability of transportation to and from the job site.

Another limitation may have involved the list of strategies included on the survey. The items asked respondents to identify strategies they use to facilitate paid work experiences. As some PSE programs only provide internships or unpaid work experiences for students, these respondents may have been unsure how to respond. Four respondents provided written responses that indicated this was the case for their program. Other respondents who do not offer paid work experience may have also been unsure how to respond to these items.

**Qualitative limitations.** As there are always limitations associated with survey administration, qualitative interviews also have inherent limitations. The interviews represent solely the views of 10 individuals who facilitate work experiences for students with ID in PSE programs. While their views may, in fact, represent those of the entire population, they are in actuality the views of the sample.
Missing data were also a concern in the qualitative phase of the study. For the research questions involving barriers and strategies (research questions 1 and 2), interviewees were presented with a list of items identified frequently in the survey responses. Participants were then only asked a general question about the groups of items, specifically “Does anything on this list surprise you?” While this question lead to broad agreement with the items on the lists, more detailed information could have perhaps been collected if each item was asked about individually (as was done for research question 3). As a result of this broad question, some items on the list were not specifically addressed by the interviewees. Not having this detailed information about each item may have misguided the meta-inference process or perhaps have left a gap to answer the research questions in a holistic manner.

Another limitation related to the interviews involves the inquiry regarding barriers and strategies that were identified as being less significant by respondents. The questions that were asked in the interview were designed to explore the most critical barriers and most commonly used strategies. Fruitful data could have potentially been collected if questions were asked about certain items that survey respondents identified as not being a barrier or a strategy that was not commonly used. For example, asking interviewees about the high level of confidence regarding their staff’s training could have yielded valuable information.

**Future Research**

While this study provides information that can be translated directly into practice for those facilitating paid work experiences for student with ID in PSE programs, there is more research necessary to better understand how to support these opportunities.

As PSE programs are relatively new, longitudinal data have only recently started to become available. Collecting long-term data would be helpful in understanding the impact of
different types of work experience on the employability of program graduates. For example, it would be important to understand if paid work experience leads to better employment outcomes than work experience that is unpaid. While the literature is rich with information about these differences when looking at students in school-based programs, no research has been conducted to explore how this impacts students in PSE programs. In addition, further research regarding the impact of the extent to which work experiences are inclusive or integrate impacts long-term employability would also be beneficial to those facilitating work experiences for students in PSE programs.

Valuable data could be collected by exploring the perspectives of employers who provide work experiences to students with ID enrolled in PSE programs. As PSE program personnel are generally reliant upon business owners and managers to provide work experiences, understanding their perspectives regarding supports and strategies may also lead to an increase in opportunities for students seeking these experiences. Employers are a key component in this process and as such, hold information that can be potentially quite useful in this process.

As mentioned earlier, a notable limitation to this current study involves the omission of potentially noteworthy characteristics. Future researchers may consider exploring any potential relationships between the size of the IHE (i.e., number of total students) and the setting (e.g., rural, urban, suburban) on barriers for facilitating paid work experiences. Interview data from this study suggest that these relationships may have an impact on barriers to facilitating paid work experience, such as transportation issues.

Future research may also involve exploration of strategies used by PSE program personnel to overcome the barriers identified in this study. While strategies were also explored as part of this study, they were not connected to specific barriers. Additional interviews with PSE
program personnel may lead to valuable information about managing the impact of these barriers to facilitating paid work experiences. Similarly, survey respondents were provided with an opportunity to identify barriers to facilitating paid work experiences. Several identified family or student concerns regarding the potential loss of disability-related benefits as a barrier to facilitating paid work experience. As this was confirmed by several interviewees, future research should involve an exploration of how this may impact paid work experience in PSE programs. Finally, research might also involve exploring how PSE program staff address family and student concerns over the potential loss of benefits and long-term strategies for managing this potential issue.

Conclusion

PSE programs for students with ID have become increasingly common in the United States. Such programs provide opportunities students who would traditionally not otherwise have to access post-secondary education endeavors. In addition, PSE programs are valuable due to their potential to increase post-school opportunities for students with disabilities. While not all programs have a focus on career development, most PSE offerings for students with ID have a goal of increased employment opportunities for program graduates.

In order to increase employability skills for youth with disabilities, many PSE programs feature paid work experience opportunities for their students. As PSE program staff are reliant on businesses (on-campus or in the community) to provide these authentic training opportunities, it is essential that they be aware of potential barriers to facilitating such experiences. In addition, having an awareness of strategies used by PSE programs across the country to facilitate paid work experiences for students may increase opportunities.
This study featured research exploring and describing common barriers to facilitating paid work experience, as well as strategies used by PSE program staff to increase these valuable opportunities for students. While this is only one component of a well-designed career development program, PSE program staff will be able to use this information to increase opportunities, and as such expand the employability of youth with disabilities.

Especially because PSE programs feature wide variances in program design and characteristics, understanding barriers to facilitating work experiences as well as strategies to increase work experience opportunities is important. PSE program staff may use the information presented in this study to help design work experience programs that are well-aligned with the context of their own program. Increasing paid work experience opportunities for students in PSE programs can provide opportunities for members of this under-employed population to be employed in a meaningful way. Doing so not only benefits individuals with ID, but also provides an opportunity for the greater society to be even better through integration.
REFERENCES


Appendix A
Survey Instrument

WASHINGTON STATE UNIVERSITY
College of Education, Department of Teaching & Learning
Research Study Consent Form

Study Title: Exploring Barriers and Strategies for Facilitating Work Experience Opportunities for Individuals with Intellectual Disabilities Enrolled in Post-Secondary Education Programs.

Researchers:
Dr. Brenda L. Barrio, Assistant Professor of Special Education
Andrew Scheef, Ph.D. Candidate
Washington State University, Department of Teaching & Learning, (509) 335-2525

You are being asked to take part in a research study carried out by Dr. Brenda Barrio and Andrew Scheef. This form explains the research study and your part in it if you decide to join the study. Please read the form carefully, taking as much time as you need. Ask the researcher to explain anything you don’t understand. You can decide not to join the study. If you join the study, you can change your mind later or quit at any time. There will be no penalty or loss of services or benefits if you decide to not take part in the study or quit later.

What is this study about?
This study involves exploring work experience opportunities for students enrolled in a post-secondary education (PSE) program for individuals with intellectual disabilities (ID). Specifically, challenges to facilitating work experiences as well as strategies used by programs to increase opportunities will be explored.

What will I be asked to do if I am in this study?
If you choose to continue, the next page will start a survey. In addition, you will have the opportunity to volunteer to participate in a follow-up interview.
Are there any benefits to me if I am in this study?
The information you share has the potential to help students with disabilities be better prepared to find and maintain work, which in turn helps everyone. Also, you will have the opportunity to receive a text message code to receive a free movie rental through Redbox.

Are there any risks to me if I am in this study?
The researchers are not foreseeing any further risks than may be inconvenience to the participants in terms of time.

Will my information be kept private?
The data for this study will be kept confidential to the extent allowed by federal and state law. No published results will identify you, and your name will not be associated with the findings. Under certain circumstances, information that identifies you may be released for internal and external reviews of this project. The finished surveys will be collected and looked at together to help learn how the programs have or have not helped you. Your responses will be stored in a secure area and will be destroyed in five years. Only the researchers will have access to the information you give. The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain anonymous.

Are there any costs or payments for being in this study?
There will be no costs to you for taking part in this study. For completing the survey, you will have the opportunity to receive a text message code to receive a free movie rental through Redbox.

Who can I talk to if I have questions?
If you have questions about this study or the information in this form, please contact the researcher: Dr. Brenda L. Barrio: Brenda.Barrio@wsu.edu, (509) 335-2525, Cleveland Hall 334, P.O. Box 64132, Pullman, WA 99164-2132. If you have questions about your rights as a research participant, or would like to report a concern or complaint about this study, please contact the Washington State University Institutional Review Board at (509) 335-3668, or e-mail irb@wsu.edu, or regular mail at: Albrook 205, PO Box 643005, Pullman, WA 99164-3005.

What are my rights as a research study volunteer?
Your participation in this research study is completely voluntary. You may choose not to be a part of this study. There will be no penalty to you if you choose not to take part. You may choose not to answer specific questions or to stop participating at any time.

By continuing, you agree that:
You understand the information given to you in this form. You have been able to ask the researcher questions and state any concerns. The researcher has responded to your questions and concerns. You believe you understand the research study and the potential benefits and risks that are involved.

"Intellectual disability involves impairments of general mental abilities that impact adaptive functioning in three domains, or areas. These domains determine how well an individual copes with everyday tasks:
- The conceptual domain includes skills in language, reading, writing, math, reasoning, knowledge, and memory.
- The social domain refers to empathy, social judgment, interpersonal communication skills, the ability to make and retain friendships, and similar capacities.
- The practical domain centers on self-management in areas such as personal care, job responsibilities, money management, recreation, and organizing school and work tasks."

(DSM-5)
Does your program serve *individuals with intellectual disabilities* in a post-secondary setting?

- Yes
- No

Which best describes your role in the post-secondary education (PSE) program?

- *All or most of my job responsibilities involve designing and/or facilitating career development opportunities (including work experience) for students in the program*
- *Part of my job responsibilities involve designing and/or facilitating career development opportunities (including work experience) for students in the program*
- *None of my job responsibilities involve designing and/or facilitating career development opportunities (including work experience) for students in the program*

This survey is designed for someone who is involved with a PSE program and has knowledge of work experience practices.

Could you please provide an email address for someone in your program who facilitates work experiences?

- Yes! Here is their email address:

  [Email Address]

- Nobody in our program helps facilitate paid work experiences. Please explain why this is the case

  [Reason]

How long have you worked with this PSE program?

- Less than 1 year
- 1-2 years
- 3-4 years
- 5-6 years
More than 6 years

Please indicated the name of program for which you are reporting. If you are not comfortable providing this information, you may still continue to the next section. *(please keep in mind that the survey results will remain confidential and data will only be reported in aggregate form).*

Which best describes your institution?

- **College** – A four-year college grants bachelor’s degrees (Bachelor of Arts; Bachelor of Science)
- **University** – A university grants bachelor's, master's degrees, and/or doctoral programs, and sometimes includes a professional school such as a law school or medical school. Universities tend to be larger than colleges, focus more on scholarly or scientific research.
- **Community college** – A public two-year college granting associate’s degrees and sometimes certificates in particular technical (career-related) subjects.
- **Junior college** – Similar to a community college, except that a junior college is usually a private school.
- **Career school, technical school, or vocational/trade school** – May be public or private, two-year or less-than-two-year. Career schools offer courses that are designed to prepare students for specific careers, from welding to cosmetology to medical imaging, etc.

How many years has the program been in existence?

- Less than 1 year
- 1-2 years
- 3-4 years
- 5-6 years
- More than 6 years

Please indicate *the total number of students* currently enrolled in your program.

- 1-10 students
- 11-20 students
- 21-30 students
- 31-40 students
- more than 40 students

For *how many years* are most students enrolled in your program?
Which, if any, of the following options are used to fund tuition and services for students with intellectual disabilities in your program?

<table>
<thead>
<tr>
<th>Source of Funding</th>
<th>No contribution</th>
<th>Small contributor</th>
<th>Large Contributor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private pay (student &amp; family)</td>
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</tr>
<tr>
<td>University scholarships or tuition waivers</td>
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<tr>
<td>Adult intellectual/developmental disability provider agencies</td>
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<tr>
<td>Local school district</td>
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<tr>
<td>Financial aid (Pell grants, etc.)</td>
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<tr>
<td>TPSID grant (US Department of Education)</td>
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<tr>
<td>Federal/State grant (non-TPSID)</td>
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<tr>
<td>Foundation/Private grant</td>
<td></td>
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</tr>
<tr>
<td>Vocational Rehabilitation funds</td>
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<tr>
<td>State Level Developmental or Intellectual Disabilities Agency</td>
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<td></td>
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<tr>
<td>Medicaid Waiver funds</td>
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<tr>
<td>Other</td>
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<tr>
<td>Other</td>
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</tbody>
</table>

To what extent does your program prioritize the following potential outcome goals for students in the program?

<table>
<thead>
<tr>
<th>Outcome Goal</th>
<th>Not a priority</th>
<th>Low priority</th>
<th>Moderate Priority</th>
<th>High Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to college courses</td>
<td></td>
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<tr>
<td>Improved independent living skills</td>
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<tr>
<td>Improved academic skills</td>
<td></td>
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<tr>
<td>Improved competitive employment outcomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Improved social skills</td>
<td></td>
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<tr>
<td>The opportunity to have a college experience</td>
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</tbody>
</table>
How many students in the program receive employment services or support (for example: career development, training, work experiences, job shadowing, job coach, etc.) from the sources listed below?

<table>
<thead>
<tr>
<th>Source</th>
<th>None (0%)</th>
<th>Some (1% - 50%)</th>
<th>Most (51% - 99%)</th>
<th>All (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School district personnel</td>
<td></td>
<td></td>
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<tr>
<td>Vocational rehabilitation counselors</td>
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<tr>
<td>Peer mentors</td>
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<tr>
<td>Local disability support or advocacy agencies</td>
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<tr>
<td>Job coach employed by PSE</td>
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</tbody>
</table>

How many students in your program are employed in the work settings listed below? (please indicate by marking the appropriate box for each item).

<table>
<thead>
<tr>
<th>Work Setting</th>
<th>None (0%)</th>
<th>Some (1% - 50%)</th>
<th>Most (51% - 99%)</th>
<th>All (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Paid work (paid by the employer in the community)</td>
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<tr>
<td>Individual Paid work (paid by the employer on campus)</td>
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</tr>
<tr>
<td>Group Paid work (enclave or mobile work crew) in the community</td>
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<tr>
<td>Group Paid work (enclave or mobile work crew) on campus</td>
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<tr>
<td>Unpaid internships/volunteering in the community</td>
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<tr>
<td>Unpaid internships/volunteering on campus</td>
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<tr>
<td>Paid sheltered worksite (mostly co-workers with disabilities)</td>
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<tr>
<td>Unpaid sheltered worksite (mostly co-workers with disabilities)</td>
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<tr>
<td>Other (please specify)</td>
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</tbody>
</table>

Please describe the extent to which the each of these is a barrier to finding paid work experiences for participants in your program.
### Staff factors:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Not a barrier</th>
<th>Small barrier</th>
<th>Large Barrier</th>
<th>Critical Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our staff’s lack of training regarding integrated employment</td>
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<tr>
<td>Our staff’s lack of training regarding customized employment</td>
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<tr>
<td>Our staff’s lack of training regarding job development</td>
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<tr>
<td>Inadequate number of staff hours to support students in the workplace</td>
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</table>

### Student factors:

<table>
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<tr>
<th>Issue</th>
<th>Not a barrier</th>
<th>Small barrier</th>
<th>Large Barrier</th>
<th>Critical Barrier</th>
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</thead>
<tbody>
<tr>
<td>Students' lack of job skills</td>
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<tr>
<td>Students' low self-motivation (lack of initiative)</td>
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<td>Students' lack of self-responsibility (not trustworthy)</td>
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<tr>
<td>Students' low self-accountability (low quality control)</td>
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<tr>
<td>Students' problem behaviors</td>
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<tr>
<td>Students' poor hygiene</td>
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<tr>
<td>Students poor attendance</td>
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<tr>
<td>Students enter the program without adequate employability training</td>
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<tr>
<td>Students enter the program without adequate vocational assessments</td>
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<tr>
<td>Finding time in the student’s schedule</td>
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<tr>
<td>Transportation Issues</td>
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<tr>
<td>Students' low reading skills</td>
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<tr>
<td>Students' low math skills</td>
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<tr>
<td>Students' low-level of fluency with technology</td>
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</table>

### Business factors:

<table>
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<tr>
<th>Issue</th>
<th>Not a barrier</th>
<th>Small barrier</th>
<th>Large Barrier</th>
<th>Critical Barrier</th>
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<tbody>
<tr>
<td>Changes in management in businesses</td>
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<tr>
<td>Limited number of weekly available hours offered by employers</td>
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<tr>
<td>Employers unwillingness to work with individuals with disabilities</td>
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<td>Employer perceptions of the abilities of people with disabilities</td>
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<tr>
<td>Employer concerns regarding accommodations</td>
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</table>
Layoffs due to seasonal work  
Lack of paid jobs in the area  
Not a barrier Small barrier Large Barrier Critical Barrier

Family factors:

<table>
<thead>
<tr>
<th></th>
<th>Not a barrier</th>
<th>Small barrier</th>
<th>Large Barrier</th>
<th>Critical Barrier</th>
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</thead>
<tbody>
<tr>
<td>Concerns of family members</td>
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<tr>
<td>Over-involvement of family members</td>
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<tr>
<td>Under-involvement of family members</td>
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</table>

Please identify any other barriers to paid employment that may exist (please also identify if it is a small or large barrier)

How often do you use the following strategies to facilitate or support paid job experiences for students in your program?

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilize existing employer networks (like Chamber of Commerce)</td>
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<tr>
<td>Negotiate the scope of the job with employers so that it benefits both the business and student</td>
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<tr>
<td>Match student strengths with a position</td>
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<tr>
<td>Match student interests with their work experience position</td>
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<tr>
<td>Provide students with an opportunity to relate what is learned in the workplace to what is learned in the instructional curriculum</td>
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<tr>
<td>Involve family members</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with Vocational Rehabilitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with employers who have had prior experiences with employees with disabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approach employers with a charitable appeal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilize natural supports in the workplace</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide training to our staff on job development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Train employers and co-workers to improve skills to better work with people with disabilities
Encourage businesses personnel to be involved with our program at our program site (not the job site)
Build a trusting relationship with the employer
Use testimonials from businesses that have participated in the past
Solicit feedback from employer regarding the placement
Suggest short-term trials with student workers
Identify potential co-worker mentors in the workplace
Approach employers with information about how a placement can positively impact their bottom line
Provide direct on-site training for the students in the workplace

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
</table>

Please describe any other strategies you use to facilitate or support paid work experience for you students (please also indicate the frequency: rarely, sometimes, often, always)

Do you work with Vocational Rehabilitation (VR) to facilitate paid work experiences for students in your program?

- Yes
- No

Please indicate the extent to which you agree with the following statements:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our partnership with VR helps students find paid work experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The VR counselor demonstrates knowledge of individual students and their interests</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My schedule allows me sufficient time to collaborate with the VR counselor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The VR counselor is available to collaborate with students in our program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our students continue to utilize VR resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
after the leave the program

Our VR counselor demonstrates knowledge of supports available to students in post-secondary education programs

Please indicate the extent to which you agree with the following statements regarding student work experiences:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>We facilitate opportunities for students to work in the summer months between academic years</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our students find paid employment during the summer months between academic years</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students will be able to sustain paid employment when they finish our program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employers who have hosted students in the past are usually willing to do so again</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employers are willing to work with our students, even if they have had a bad experience previously</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our program is able to procure work experience opportunities for every student that is interested</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students talk directly with employers themselves when seeking paid work experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family member express and expectation that the student will find work after completing our program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Would you be willing to participate in a follow-up interview?

- Yes
- No

Thank you for being willing to participate in an interview.

Please provide your name:

Please provide your email:
Please provide a phone number:

Thank you for your help. If you would like a free DVD rental through RedBox, please include an email address below. A promo code will be sent to you within 24 hours. (Note: It seems like .edu email addresses may having problems with the Redbox code. If you can, please supply a different type of email address)
Appendix B
Interview Protocol

“Thank you for your willingness to participate in this voluntary study. Your responses are confidential and your name will not be used in any reports that include information from this interview. I would appreciate your consent to allow me to audio record this interview. Any audio recorded will be transcribed and will not be reproduced, shared, or used in any other capacity.”

1) Please describe your program.

2) Please describe your role in the program

3) Tell me about the kind of work experiences students in your program are involved with.

4) Of these opportunities, how many do you estimate are paid work experiences (as opposed to unpaid or volunteer)?

5) What are your feelings regarding the value of paid work experience over unpaid or volunteer work experience for student? Does it matter if it is paid work?

6) Frequently identified barriers to finding paid work for students by survey respondents include: Transportation issues, Employer perceptions of the abilities of people with disabilities, Finding time in the student’s schedule, Inadequate number of staff hours to support students in the workplace.

   a. Does anything on this list surprise you?
   b. What other barriers do you feel are the most significant for your program?
   c. Several people identified concerns regarding loss of benefits as an additional barrier. Do you find that to be the case?

7) Frequently identified strategies to finding paid work by survey respondents include: Solicit feedback from employer regarding the placement, Build a trusting relationship with the employer, Match student interests with their work experience position, Negotiate the scope of the job with employers so that it benefits both the business and student, Provide direct on-site training for the students in the workplace, Utilize natural supports in the workplace, and Provide students with an opportunity to relate what is learned in the workplace to what is learned in the instructional curriculum

   a. Does anything on this list surprise you?
   b. What other strategies do you feel are the most useful for your program?
8) The following statements represent statistically significant correlations between items on the survey. Do you have any insight into the extent to which they may be connected, or do they seem unrelated to you?

**Factor: Type of Institution of Higher Learning**

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
<td>2.00</td>
<td>.00</td>
</tr>
<tr>
<td>University</td>
<td>1.95</td>
<td>.78</td>
</tr>
<tr>
<td>Community College</td>
<td>2.38</td>
<td>1.04</td>
</tr>
<tr>
<td>Vocational School</td>
<td>3.40</td>
<td>.89</td>
</tr>
</tbody>
</table>

**Barrier: Employers unwillingness to work with individuals with disabilities**

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
<td>1.75</td>
<td>.96</td>
</tr>
<tr>
<td>University</td>
<td>1.31</td>
<td>.62</td>
</tr>
<tr>
<td>Community College</td>
<td>1.79</td>
<td>1.05</td>
</tr>
<tr>
<td>Vocational School</td>
<td>2.60</td>
<td>.89</td>
</tr>
</tbody>
</table>

**Barrier: Layoffs due to seasonal work**

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
<td>1.75</td>
<td>.97</td>
</tr>
<tr>
<td>University</td>
<td>1.31</td>
<td>.87</td>
</tr>
<tr>
<td>Community College</td>
<td>1.79</td>
<td>.38</td>
</tr>
<tr>
<td>Vocational School</td>
<td>2.60</td>
<td>.89</td>
</tr>
</tbody>
</table>

**Factor: Program funding through Federal Student Aid**

<table>
<thead>
<tr>
<th>Extent of Contribution</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Contribution</td>
<td>2.68</td>
<td>.97</td>
</tr>
<tr>
<td>Small Contributor</td>
<td>2.38</td>
<td>.87</td>
</tr>
<tr>
<td>Large Contributor</td>
<td>3.86</td>
<td>.38</td>
</tr>
</tbody>
</table>

**Barrier: Transportation issues**

<table>
<thead>
<tr>
<th>Extent of Contribution</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Contribution</td>
<td>2.18</td>
<td>.84</td>
</tr>
<tr>
<td>Small Contributor</td>
<td>2.15</td>
<td>.80</td>
</tr>
<tr>
<td>Large Contributor</td>
<td>3.29</td>
<td>.76</td>
</tr>
</tbody>
</table>

**Barrier: Over-involvement of family members**

<table>
<thead>
<tr>
<th>Extent of Contribution</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Contribution</td>
<td>1.25</td>
<td>.50</td>
</tr>
</tbody>
</table>

**Factor: PSE Outcome Goal (Independent Living Skills)**

<table>
<thead>
<tr>
<th>Extent of Goal Prioritization</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Priority</td>
<td>1.25</td>
<td>.50</td>
</tr>
</tbody>
</table>
Moderate Priority 1.20  .42
High Priority 1.75  .57

(more on next page…)

Factor: Source of Employment Supports (Vocational Rehabilitation)

<table>
<thead>
<tr>
<th>Students Using Supports</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>1.41</td>
<td>.94</td>
</tr>
<tr>
<td>Some</td>
<td>2.68</td>
<td>1.11</td>
</tr>
<tr>
<td>Most</td>
<td>2.00</td>
<td>1.00</td>
</tr>
<tr>
<td>All</td>
<td>2.75</td>
<td>1.17</td>
</tr>
</tbody>
</table>

Factor: Student Employment Setting (Individual Paid in the Community)

<table>
<thead>
<tr>
<th>Students in Setting</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>2.00</td>
<td>1.04</td>
</tr>
<tr>
<td>Some</td>
<td>2.29</td>
<td>1.13</td>
</tr>
<tr>
<td>Most</td>
<td>1.00</td>
<td>.00</td>
</tr>
</tbody>
</table>
Appendix C

Invitation to Complete Survey

Dear (name),

I am seeking your assistance as I collect data for my Ph.D. dissertation. I am hoping you will share your expertise and knowledge to help me learn more about paid work experiences for students in post-secondary education (PSE) programs for individuals with intellectual disabilities. The main focus of my research involves learning more about challenges programs face when facilitating work experiences as well strategies used to promote partnerships with businesses.

You have been included in this survey because you are involved with a PSE program. If there is someone affiliated with your program who has a better understanding of the kind of work experiences offered to your students, could you please forward this email to this person? I would like only one response for each PSE program. The questionnaire is short and should take approximately 10 minutes. As a small “thank you” for your time, those who complete the survey will have the opportunity to receive a promo code for a free DVD rental through Redbox.

The survey is best viewed on a computer or non-handheld device.

Follow this link to the Survey: Take the Survey

Or copy and paste the URL below into your internet browser: https://educationwsu.co1.qualtrics.com/SE?SID=SV_9oYrRyjUSzB4nI1&Q_CHL=email&Preview=Survey

The survey is confidential and any results will be presented without identifying information. Your participation is voluntary. Should you have any questions, please contact Andrew Scheef, at 509-338-5773 or ascheef@wsu.edu.

Many Thanks,
Andrew Scheef & Dr. Brenda Barrio
Washington State University Department of Teaching & Learning
Cleveland Hall 240
Pullman, WA 99163
Appendix D

General Demographic Factors with Significantly Different Responses (ANOVA): Items with Curious Response Patterns That Were Not Further Explored in the Study.

### Characteristic: Program Length
Barrier with Significance Differences:
Students' low-level of fluency with technology, $F(4, 58) = 4.67, p = .002$

<table>
<thead>
<tr>
<th>Number of Years Enrolled</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Year ($n = 8$)</td>
<td>1.75</td>
<td>.71</td>
</tr>
<tr>
<td>2 Years ($n = 31$)</td>
<td>2.16</td>
<td>.64</td>
</tr>
<tr>
<td>3 Years ($n = 11$)</td>
<td>1.27</td>
<td>.47</td>
</tr>
<tr>
<td>4 Years ($n = 11$)</td>
<td>2.18</td>
<td>.75</td>
</tr>
<tr>
<td>More than 4 Years ($n = 2$)</td>
<td>1.50</td>
<td>.71</td>
</tr>
</tbody>
</table>

### Characteristic: Program Funding (Scholarship)
Barrier with Significance Differences:
Student responsibility, $F(2, 55) = 7.06, p = .002$

<table>
<thead>
<tr>
<th>Extent of Contribution</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Contribution ($n = 32$)</td>
<td>1.47</td>
<td>.51</td>
</tr>
<tr>
<td>Small Contributor ($n = 21$)</td>
<td>2.05</td>
<td>.67</td>
</tr>
<tr>
<td>Large Contributor ($n = 5$)</td>
<td>1.40</td>
<td>.55</td>
</tr>
</tbody>
</table>

### Characteristic: Program Funding (Developmental Disability Agency)
Barrier with Significance Differences:
Student motivation, $F(4, 56) = 6.02, p = .004$

<table>
<thead>
<tr>
<th>Extent of Contribution</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Contribution ($n = 25$)</td>
<td>1.74</td>
<td>.62</td>
</tr>
<tr>
<td>Small Contributor ($n = 24$)</td>
<td>2.44</td>
<td>.82</td>
</tr>
<tr>
<td>Large Contributor ($n= 8$)</td>
<td>1.88</td>
<td>.64</td>
</tr>
</tbody>
</table>