DOES A MULTI-MEDIA PROGRAM ENHANCE JOB MATCHING FOR A
POPULATION WITH INTELLECTUAL DISABILITIES? A SOCIAL VALIDITY
STUDY

by

Kim M Michaud
A Dissertation
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of
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Dedication

This is dedicated to my best friend and soulmate for 35 years, Tom, our incredible four grown and successful children, Max, Adrienne, Yvette, and Gabe, and my mom Barbara, who taught me that you are never too old to expand your horizons.

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List of Abbreviations

Comprehensive Transition Program .... CTP
Developmental Disability ....DD
Free Appropriate Public Education..FAPE
Higher Education Opportunity Act.. HEOA
Individuals with Disabilities Act ....IDEA
Individualized Education Program ....IEP
Intellectual Disability.. ID
Institute of Higher Education…………………………………………………..IHE
Intellectual Quotient…………………………………………………………….IQ
Least Restrictive Environment…………………………………………….......LRE
National Institute on Disability and Rehabilitation Research……………………...NIDRR
No Child Left Behind……………………………………………………….NCLB
Office of Special Education and Rehabilitation Services…………………………OSERS
Office of Special Education Programs………………………………………………OSEP
Postsecondary Education Program…………………………………………..PSE
Rehabilitation Services Administration……………………………………………RSA
Self-Determined Career Development Model…………………………………SDCDM
Severe Mental Illness……………………………………………………………SMI
Transitional and Postsecondary Programs for Students with Intellectual
　　　　Disabilities…………………………………………………………TPSIDS
University Centers for Excellence in Developmental Disabilities
　　　　Education……………………………………………………………..UCEDD
Vocational Rehabilitation………………………………………………………VR
Workforce Innovation and Opportunity Act………………………………….WIOA
Workforce Investment Act…………………………………………………WIA

ABSTRACT

Does a Multi-Media Program Enhance Job Matching for a Population with Intellectual Disabilities? A Social Validity Study

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George Mason University, 2017

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This dissertation describes a mixed method design study on the social validity of a multi-media job search tool, the YES tool, at a four-year Comprehensive Transition Program at an East Coast University. The participants included twelve students, randomly selected from those who, with their parents' assent, agreed to volunteer for this study during the Orientation Weekend. There were three students selected from each of the four years of the Program. The students' parents, the Employment Administrators (including the Director), the Work Support staff, the first-year first semester Employment Instructors, and some of the General staff were also participants. Likert scale questionnaires, frequencies of observed behaviors were used to provide the quantitative data; semi-structured interviews were used to elicit the qualitative data. The participants found the use of the YES job search tool to be socially valid for this program. The goal of the tool, to provide job choices through video presentations, and then match those with the user's aptitudes, was fund to be important. The procedures to utilize the tool were found to be acceptable: (a) inexpensive, (b) easy to use, and (c) interesting. The results of the job

profiles were found to be effective, producing new possibilities, and indicating where

more training or accommodations might be needed.

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Chapter One

Being successfully employed is a basic component of human functioning. West,

Wehman, and Wehman (2005), indicated that there are several benefits from working that

can benefit the wage earner with a disability in American culture such as: (a) an

enhancement of an individual's status and self-worth; (b) increased financial security and

subsequent control over personal life choices; (c) an opportunity to work with coworkers

and develop interpersonal relationships; and (d) a venue to overcome the stigma of

disability by being perceived as productive and competent.

For those individuals diagnosed with intellectual or developmental disabilities, the

ability to find and maintain a full-time job that matches their interests and aptitudes is

often difficult due to a variety of factors. Though there are new strategies, interventions

and tools that now exist for this population to facilitate them finding and maintaining

suitable employment, additional research is needed to determine the extent of their social

validity.

This chapter gives a brief synopsis of the challenges, stratagems, and innovations

for preparing this population for successful employment in the United States. This

backdrop will provide a foundation for a discussion of both statement and significance of

the problem which undergirded the research study. Lastly, the study's purpose and

research questions are delineated.

Background of Problem

  Overview of challenges. An intellectual disability refers to limitations of cognitive functioning which is global in nature. It is considered a developmental disability, since it began before an individual was 18, and restricts that person from adapting to societal demands (AAIDD-https://aaidd.org).

  An individual with an intellectual disability can be challenged with making sense of things, planning, learning from experience (generalizing), thinking about complex or abstract ideas, and solving problems (Wehmeyer & Obremski, 2010). Per the Bureau of Labor Statistics (United States Department of Labor, 2016), in 2015, 17.5% of individuals with disabilities ages 16 to 64 were employed, as compared to 65% of individuals without disabilities in the same age range. Past studies have shown that even among individuals with disabilities, individuals with intellectual disabilities are less likely to be employed (39% vs. 59 – 67%), and worked fewer hours per week (28 hours vs. 34 to 38 hours) than those with other forms of disabilities (Newman et al., 2011)

  Certainly, the preparation for providing proper training and accommodations to support those seeking to secure suitable employment is far more extensive for those with disabilities than for individuals without disabilities. This preparation can include specially designed vocational functioning assessments, job redesign to accommodate functional and/or capability limitations, and individual or group couching to teach strategies for self-advocacy skills (Niles & Harris-Bowlsbey, 2009). Individuals with intellectual disabilities, specifically, however, can face additional barriers. Some of the accommodations, modifications and supports that they might need to compensate for

their cognitive limitations are not recognized options that can always be legally protected by law.

The Americans with Disabilities Act of 1990 is a law that indicates that an employer must provide a qualified employee with *reasonable* accommodations that do not cause *an undue hardship* on the operation of a business. If there is a serious enough dispute between the employer and the employee with a disability, the terms *reasonable* and *undue hardship* are open for the interpretation of the court. Accommodations such as permanent coaching, redesigning job tasks so that they can be accomplished by a team, or restructuring job tasks, may not even be recognized by a particular court as authentic and legal accommodations (Francis, 2004; Snell et al., 2009).

The following historical example refers to a case against Dollar General, a company that would not allow a permanent job coach for an employee with an intellectual disability, even though the company did not have to pay for the coaching services. The court decided that such an accommodation would be an *undue hardship* for Dollar General, and therefore could not be considered *reasonable* (EEOC v Dollar General Corp., 2003)

> Thus to summarize, as the *Dollar General* court read the ADA, employee qualifications are to be measured in their unsupported state. Job coaching must be temporary and must not supplant the employee's individual performance. Permanent job coaching cannot be a reasonable accommodation as a matter of law, even if the employer bears no costs and incurs no inconvenience. Such isolationist demands are not made of either physically disabled employees (who

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may need readers, signers, and so on) or even non-disabled employees, who may have to work together to accomplish their tasks (Francis, 2004, p. 319).

Reasonable accommodations. Even though the above case was decided fifteen years ago, and case law decisions change, the fact that there might be flexible interpretation about what accommodations may be considered as *reasonable* needs to be taken into consideration when identifying and preparing for job opportunities that might be available. Wehmeyer et al. (2009) described best practice steps for finding a suitable employment match for someone with a disability. First, the necessary skills for available jobs of interest need to be identified. Next, these requirements should be compared with an individual's strengths and weaknesses. Lastly, it needs to be determined what, if any, modifications, accommodations, or support the person would require to be successful at a particular job. In addition, as the above court case has shown, it is also necessary to determine whether such supports would be considered reasonable by a potential employer. Therefore, it is important that career development intervention for this special needs' population involve the use of tools that can help compare individual's specific aptitudes with the job requirements positions that are of interest. The use of such tools assist individuals with disabilities to discover available employment which matches their interests, and indicate the specific areas of aptitude that would require additional training, accommodation, modification, or possible supports. With specific accommodations delineated in this manner, the employer and the potential employee with the disability are then better prepared to decide whether a particular position would be a good fit for both.

Functional transitional curricula. Job skill specific training, vocational

functional assessment, person and job specific accommodation discovery, and self-

advocacy preparation are included in what is called *functional transitional* curricula. The

use of specific curricula are considered a best practice in preparing students with

disabilities for independence and employment (Benz, Lindstrom, & Yovanoff, 2000;

Hasazi, Furney, & Destefano, 1999; Mazzotti, 2014).

Historically, the question of who is best suited to take responsibility for preparing

students for work has been a rather complicated discussion in the field. The next section

will describe changes to career preparation over the last century as a result of changing

perceptions of how to best provide career preparation for students in general, followed by

a brief discussion about the evolution of career education for people with disabilities.

Changes to Career Preparation in General Education

The purpose of education in the United States has always been to provide learners

with job skill preparation along with supporting the development of functional literacy

skills such as reading, writing, and practical mathematics. Whether this education took

place in a one room school house, or large buildings with classes segregated by age,

training for independent employment has always been somehow integral to the nation's

educational systems (Michaud & Scruggs, 2012; Repetto & Andrews, 2012; Urban &

Wagoner, 2008). However, in response to events such as the Industrial Revolution, the

balance of emphasis on vocational verses academic preparation has shifted several times

over the past 150 years. Following the Industrial Revolution, job specific vocational

education began to be provided to the secondary students, in order to better prepare them

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for trades involving the use of machines. Then, beginning in the 1960's, the purpose of the general education system across the nation became fragmented and subsequently diluted. Students were tracked into programs with two different areas of emphasis. One track emphasized intellectual development and college preparation. A second track commonly known as the *general track* involved remedial English and math, trial work experiences that took place outside of the school setting, and health and physical education (National Commission on Excellence in Education, 1983).

However, flaws in this tracking system became apparent as many students at the secondary level involved in the general track were deemed functionally illiterate; graduates were lacking the reading and writing skills for coping with most jobs and many everyday situations. A report issued by the National Commission on Excellence in Education (1983) indicated that, "Business and military leaders complain that they are required to spend millions of dollars on costly remedial education and training programs in such basic skills as reading, writing, spelling, and computation..." (Indicators of the Risk section, bullet 13). In response to this report, vocational education was first re-emphasized, and later, national curriculum based standards were enacted, emphasizing academic achievements, in particular (Education Trust, 2004; Forte, 2010; Michaud & Scruggs, 2012; Schraw, 2010; Texas Public Policy Foundation, 1998).

Changes to Career Preparation in Special Education

Individuals with disabilities have been educated in a variety of different milieu options, including personal residences, general education classrooms, disability specific schools (especially for those with blindness or deafness) and institutions. Before the late

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19th century, those diagnosed with intellectual and other disabilities were educated in classrooms along with those without disabilities, unless they presented an *undue burden* upon the teacher. If students did present an undue burden on the teacher, they were either sent to segregated classes, or sent to specialized institutions. For a period of time during the late 19th until the early 20th century, people with intellectual disabilities were even completely isolated from society because of an unsubstantiated fear that their disability might be somehow contagious to others. Although this discriminatory prejudice was widely dispelled after the 1920, many students with disabilities continued to be taught in sheltered instructional settings such as separate classes or institutions specifically developed to accommodate special needs. (Michaud & Scruggs, 2012; Stark, Schalock & Berland, 1986; Zigmond & Kloo, 2011).

After World War II, due to the labor shortages, the National Department of Vocational Rehabilitation was given authorization and funding to begin providing occupational training for those with intellectual disabilities, as well as those with severe mental illnesses, within sheltered workshop environments. This was done on the basis that it was now recognized that with specialized training people with disabilities could become productive workers and fill the gaps in the labor ranks that the war had caused (Elliot & Leung, 2005; Havranek, Field, & Grimes, 2005; Smits, 2004). It wasn't until Ruby Jo Reeves Kennedy's longitudinal study (Kennedy, 1966), followed by President Kennedy's commissioned report from the Panel on Mental Retardation (John F. Kennedy Museum and Library, n.d.) that Congress acted to pass laws and slate funding to substantially support job preparation with both law and funding to substantially start job

preparation programs for those with intellectual disabilities. These programs used the combined team work of both special educators and vocational rehabilitation specialists (Kolstoe, 1996).

By 1973, there were over 300 work-study programs in the United States where special educators were partnered with Vocational Rehabilitation specialists and counselors to provide a systemic network of support to people with intellectual disabilities.   These work-study programs consisted of specific job specific training combined with appropriate modifications/accommodations at trial work sites. Placement assistance with permanent employment situations followed the training and trials.

After 1973, Section 504 of the Rehabilitation Act of 1973 mandated that any education institutions that received federal money would have to provide education for children with disabilities. Since occupational preparation was now considered the job of the public schools, school programs could no longer use resources and staff from vocational rehabilitation agencies partnered with their own special educators. Though the agencies and schools could still coordinate the services they provided to students, all job development programs had to be designed, staffed and funded only by the school personnel and resources (Black & Salas, 2001; Halpern, 1992; Kolstoe, 1996).

From 1975 through the 1990's laws were implemented at the national level that required reformation of general educational standards (Alwell & Cobb, 2006; Izzo, Yurick, Nagaraja & Novak, 2010; Michaud & Scruggs, 2012; Razeghi, 1996; Scruggs & Michaud, 2009; Zigmond & Kloo, 2011). PL 94-142 (Education for all Handicapped Children Act) was passed in 1975 and implemented in 1978. It required that the free,

public education that was to be provided for all school-age children with disabilities, also be offered in the least restricted environment as possible (i.e.with non-disabled students). Individualized education programs (IEP) had to be developed for each student with a disability, and children with their parents not only needed to be involved with all educational decisions, but they could request impartial hearings for conflicts over services. PL 94-142 was reauthorized in 1990 and its name was changed to Individuals with Disabilities Act (IDEA). IDEA additionally required schools to actively plan for students' transitions, and included traumatic brain injury and autism as separated conditions to be covered by law. Subsequently, as students with disabilities were increasingly integrated into the mainstream classrooms, it became progressively difficult to include functional transitional curricula along with the academic requirements for a high school diploma (Benz, Lindstrom, & Yovanoff, 2000; Hasazi, Furney, & Destefano, 1999). To better help students with disabilities in general, and those with intellectual disabilities specifically, new post-secondary program options were developed.

Postsecondary program options. There are three types of Postsecondary Education programs (PSE) currently available to students with intellectual disabilities in the United States: (a) Dual-enrollment, (b) Sponsored Programs/services for Adults, and (c) Student/Family initiated (Hart & Grigal, 2010). Student involvement in dual-enrollment programs typically begins in the last years of high school for students ages 18-21 years old, who are still receiving transition services from their school system under the Individual with Disabilities Act (IDEA) of 2004 (Pl 108-446). This system provides the

opportunity for students to complete their last two to three years of secondary education in a college setting.

Sponsored programs for adults are initiated through the collaboration of adult agencies and Institutions for Higher Educations (IHE) to provide Postsecondary Education programs for adult students with intellectual disabilities. In the case of this program, the local school systems are not involved. The Student/Family Initiated options are personalized programs which an individual and their family devise with an Institution for Higher Education.

Historically, there were three models that characterized how these programs were designed: (a) Substantially Separate model, (b) Mixed-Hybrid model, and (c) Fully Inclusive model. The *Substantially Separate* model offered instruction only for those with disabilities. The *Mixed-Hybrid* designed model offered some exclusive instruction for those with disabilities, but there were also classes or internships that included the non-disabled population. The program based on the *Fully Inclusive* design only offered instructive opportunities inclusively with the general population of students without disabilities.

When the Higher Education Opportunity Act (HEOA) was enacted in 2008, federal money became available for students with intellectual disabilities to receive grants if they attended a program that had been certified as a *Comprehensive Transition Program*. Government funding was also made available for *Model Transition Programs*. These changes required programs to increase their inclusive opportunities, so

Substantially Separate designed programs were no longer initiated (National

Coordinating Center Accreditation Workgroup, 2016).

Statement of the Problem

Vocational rehabilitation research indicates that if individuals participate in

choosing their own form of employment, people typically experience more positive

vocational outcomes (e.g. Wehmeyer, et al., 2009). Conversely, the lack of self-

determination by individuals with intellectual disabilities has also been found to be an

important contributing factor to underemployment or unemployment among populations

with disabilities (e.g. Snell et al., 2009).

According to Wehmeyer et al. (2009), fundamentally, in order to exercise self-

determination regarding their employment, an individual should discover four things.

First, people ought to develop awareness of careers or jobs that they would be interested

in pursuing. Secondly, students need to learn what skills or knowledge the jobs entail.

Third, it is necessary to identify the skills and knowledge of the individual as compared

with what is needed for a chosen selection of potential job options. Fourth, students with

disabilities, in particular, need experiences that provide them with opportunities to

examine what modifications, accommodations, and/or supports are necessary to

compensate for any job-related limitations, so that there can be a successful match

(Wehmeyer et al.).

Research indicates (e.g, Ellerd, 2002; Wehman, 1992) that the best way for

individuals with intellectual and/or developmental disabilities to become familiar with

possible job options, so they can choose which possibilities they might be interested in

pursuing, is to experience trial job placements in the community. As is the case with any student, these trial work experiences not only provide individuals with opportunities to experience the intricacies of the various types work environments, but they also provide individuals with highly contextualized opportunities to evaluate their own ability to perform well in a variety of work situations can also be evaluated (Wehman).

Historically, it has been indicated that in order to ensure positive exploratory experiences, adequate supervision needs to be provided which often means that trial placements can be costly (Wehman, Moon, Everson, Wood, & Barcus, 1988). Tools that can provide this target population with the means to become more familiar with possible job options, and to learn about what particular knowledge and skills specific vocations require, help to focus students on options that are better suited to their interests and abilities. The use of these tools reduces the number of unsuitable placements in trial job experiences and increase the number of placements in situations with a higher potential for success, and are therefore beneficial for this population's job exploratory process.

Career exploration tools must be provided in a format that population with intellectual disabilities can easily use. The options must be presented in an accessible manner so that the user can gain sufficient familiarity with the jobs presented. The user should be able to make choices freely and communicate their choices to others. Finally, career exploration tools specifically designed to meet the needs of people with intellectual disabilities should indicate where additional support or training are needed for the user to be successful with the job option of their choosing (Ellerd, 2002).

Historically, in response to these needs, researchers have developed treatments and interventions in numerous fields which they deem to be useful and effective. However, if the consumers using them, the practitioners administering them, or the guardians consenting to their use, find the strategies involved in the career exploration process to be too unpleasant, burdensome, or costly to use, or to administer, they will end up being terminated, or at least significantly changed (Schwartz & Baer, 1991).

Studying the social validity of a treatment, intervention, or a tool is a method used to ascertain whether consumers, and practitioners find their: (a) goals are socially significant; (b) procedures are socially acceptable; and (c) effects are socially important (Wolf, 1978). Wolf uses the example of a program which studies whether fluency building exercises enhance students' reading mastery advancement to be worthwhile, because understand how to improve students' reading ability is an important educational goal. Conversely, as Wolf indicated, introducing a phonics program for high school students with severe cognitive limitations might not be as worthwhile as preparing them with vocational skills. In terms of procedure acceptability, Wolf elucidates with the example that a costly reading program for high school students might be deemed acceptable, while using coercive techniques to teach reading would not be. Lastly, Wolf clarifies with the example of a reading program which increased students' reading levels by several grade levels would be considered important, but one which only increased the reading levels by a half year, would not be deemed effective enough.

There are several tools that can be utilized to assist people with intellectual disabilities in determining their job preferences. Some have pictures or line drawings of

job options, and some a have reading levels above the fourth-grade level. Tools which are not narrated, or have reading levels above the fourth-grade level, have been found difficult to be used by many of those with intellectual or developmental disabilities who cannot read at that level (Morgan, Gerity, & Ellerd, 2000). Furthermore, tools using pictures or line drawings to depict various jobs are generally difficult for this population to generalize from (Ellerd, 2002; Thomas, 1996). However, it has been found, (Stock, Davies, Secor, & Wehmeyer, 2003) that job exploration and selection tools that involve the use of videos to describe various categories of employment options, and require little reading acumen, tend to have a higher degree of success in terms of being useful for people with intellectual disabilities, and work fairly consistently with this target population. Lastly, tools which can compare the user's job related aptitudes with the chosen job's required skills can provide the data necessary for the individual and specialist to design appropriate job specific supports (Hanley-Maxwell & Izzo, 2011; Morgan, 2008; Neubert, 2012).

To summarize, career exploration tools that have been shown to have the necessary components to assist individuals with intellectual or developmental disabilities in a self-determined career exploration: (a) show videos of job options from which the individual with an intellectual or developmental disability can freely and easily choose; (b) require less than a fourth-grade reading level; and (c) can compare the user's job related aptitudes with the chosen job's required skills (Hanley-Maxwell & Izzo, 2011; Morgan, 2008; Morgan, Gerity, & Ellerd, 2000; Stock, Davies, Secor, & Wehmeyer, 2003). Some Postsecondary Education programs (PSE) have been developed specifically

for this target population to be better prepared to lead productive lives which share their gifts (Grigal & Dwyre, 2010; Grigal & Hart, 2010a).   A key problem that this study sought to address is whether staff, employment administrators, students, and their parents involved in such a PSE program find a job search tool with these necessary components to be socially valid; do they find this tool to be needed, its procedures acceptable, and its effects to be worthwhile (Wolf, 1978).

Significance of the Problem

Recall from the beginning of this chapter that according to data collected in 2015, the rate of successful employment of individuals with disabilities as compared with those without is about 17.5% to 65.5% for those between the ages of 16 – 64 (United States Department of Labor, 2016). Previous studies (e.g. Newman et al., 2011) determined that of those who are employed with disabilities, less than 40% with intellectual or developmental disabilities are employed. Simply stated, a large number of people are being denied the opportunity to be productive in society. This situation depicts a prodigious disservice that is being done not only to this population of community members, but to society at large.

The additional work necessary for specialists to assist the people with intellectual disabilities to choose and obtain appropriate employment can involve: (a) job analysis; (b) modification/accommodation design; (c) self-advocacy instruction; and (d) determining whether the necessary accommodations are deemed reasonable by the employer (Niles & Harris-Bowlsbey, 2009). Yet special educators, vocational, and transition specialists are still found to be in need of the appropriate training, guidance,

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and experience to provide people with intellectual disabilities with assistance required for them to choose and obtain suitable employment (Grigal & Hart, 2010a). It is disconcerting, therefore, to discover that there is little research being disseminated pertaining to career development interventions for individuals with disabilities.

Niles and Harris-Bowlsbey (2009) indicated that there is a lack of pertinent empirically supported career theories and interventions that apply to populations with disabilities. They indicate that in the September 2003 issue of *The Career Development Quarterly* which specifically advanced career interventions, there was little mention of development theory and practice for persons with disabilities (p. 141). Studying the social validity of a job search tool designed by both vocational rehabilitation specialists and special educators specifically for this population was, therefore, beneficial because this research contributes to addressing an important gap in the body of literature related to this topic.

Purpose Statement and Research Questions

The purpose of this study was to evaluate the social validity of the *Your Employment Selections* (YES) web-based job search tool for the students, parents and employment staff of a four-year Postsecondary Education, Comprehensive Transition Program. The goal of the study was to examine whether the tool's goals, procedures, and results of the YES program tool were socially significant, acceptable, and important from the perspective of those involved in using the tool.

The YES website tool was chosen as the focus of this study since this tool was designed collaboratively by vocational rehabilitation specialists and special educators.

Furthermore, the tool provided a significant number of job options appropriate for the study's population with research based job priorities details. The YES tool also contained an ability/skill assessment for preferred jobs based upon research based job skill requirements weighted for importance. The tool used a format which had been shown through studies to be easy to use for this study's population. Lastly, the YES tool did not require additional training or costly expenses for the study's postsecondary education program to use. The research questions were:

1. To what extent do the staff, students, and their parents, find the goal of the YES program tool important as a possible addition to this post-secondary program?

2. To what degree do the staff, students, and their parents, find the procedures of administering this tool acceptable?

3. To what extent do the staff, students, and their parents, find the effects of administering this tool useful for this post-secondary program?

Glossary of Terms

Cognitive Impairment — limitations to the ability to think, concentrate, formulate ideas, reason or remember not limited to childhood onset

Comprehensive Transitional Program — A post-secondary program for those diagnosed with intellectual disabilities which has been certified to provide support, curriculum, for educational advancement and employment which provides at least of its offerings with opportunities for students to join non-disabled students

Developmental Disability	- birth defects which cause lifelong problems with how a body part or system works
Dual-enrollment covered under Program	- a Postsecondary program for students 18-21 with disabilities IDEA to finish transition classes in a college setting
Functionally Illiterate	- reading and writing skills that are inadequate to manage daily living and employment tasks that require reading skills beyond a basic level
Functional Transition Curricula	- Skills that emphasize daily living skills, community skills, recreation and leisure and employment
General Education	- the standard curriculum taught without special methods or supports
Inclusive Individual Support Program	- a Postsecondary program for students with intellectual disabilities to take all classes and offerings with non-disabled students while supported by various methods & means
Intellectual Disabilities	- the current term recommended by the American Association of Intellectual and Developmental Disabilities (AAID; formerly known as the American Association of Mental Retardation) to refer to a state of functioning that is characterized by limitations to both intelligence and adaptive skills which begins in childhood

Mixed Hybrid Program	- a Postsecondary program for students with intellectual disabilities where the students take some of the offerings with non-disabled students, and some without
Special Education	- educates students in using methods, supports, and strategies that addresses their individual differences and needs
Sponsored Programs for Adults	- a Postsecondary program for students with intellectual disabilities who are 21 or older
Social Validity	- the evaluation of independent variables on the social: (a) importance of goals, (b) appropriateness of procedures, and (c) importance of effects
Substantially Separate Program	- a Postsecondary program for students with intellectual disabilities in which no classes or offerings contain non-disability students
Vocational Education	- any sort of formal training program that trains students for work in a particular trade
Vocational Rehabilitation	- a program or services designed for individuals with disabilities or injuries return to, or obtain employment

Chapter Two

Career development and education have intersected throughout the United States'

history in various forms for both the general and special populations. It is important to

discuss its evolution to better understand the new opportunities, as well as the tensions

and even stumbling blocks that exist today when preparing individuals with intellectual

disabilities (ID) and/or developmental disabilities (DD) for employment. Different

agencies and new education models are now available to provide assistance. There are

also new strategies and tools developed to help this population overcome barriers to

obtaining and maintaining suitable employment. The literature based framework of this

evolution provides the argument necessary for the need of additional research on the

social validity of a job matching tool designed specifically for this population.

Overview of Career Education's Intersections

Career development intersected education for the use of the general population

through various forms within the general education system before it became adapted for

use by populations with different disabilities (Repetto & Andrews, 2012). It included

vocational education, which gives instruction in specific skills needed for entry level jobs

requiring less than a four-year college program. By the mid twentieth century, career and

technical education was offered in high schools, but such education also could be

included in post four-year baccalaureate programs. Career preparation for the population

with disabilities in general, and intellectual and developmental disabilities specifically, has been extant in institutions, rehabilitation programs, both special and general education programs, and, most recently, in Postsecondary Education programs (Gerber, 2011; Grigal & Dwyre, 2010; Kelley, 2003; Papay & Bambara, 2011; Stark, Schalock, & Berland, 1986).

Michaud and Scruggs (2012), referred to the clear distinction between the definitions and purposes of both general versus special education as articulated by Zigmond and Kloo, 2011. While today general education is free and mandated for *all* children, special education, though part of the free and mandated system, is specifically tailored for *individual* children whose abilities require special education services. Both general and special education programs remained legally separate in various forms until the end of the twentieth century, when exclusion of students with disabilities from public general education classrooms became illegal (Mastropieri & Scruggs, 2010; Michaud & Scruggs, 2012).   Rehabilitation education began officially in the United States in response to the large number of soldiers who returned from World War I with evident physical disabilities such as amputations (Smits, 2004). Legislative policies, beginning in 1918 with PL 178, the Soldiers Rehabilitation Act, continued to be passed throughout the 20th century. These policies expanded in scope to include civilians, and later students, with all types of disabilities, and provided services to help them gain employment, as well as overcome dependency and exclusion in American life (Smits, 2004).

General Education and Career Development

Historically, the purpose of general education in the United States was linked with career development even during the colonial stage of the development of the nation. For example, during the seventeenth century in the Massachusetts Bay Colony, heads of households were required by the Massachusetts General Court to provide their children with occupational training, as well as to ensure that their children could understand the laws of the state (Michaud & Scruggs, 2012; Urban & Wagoner, 2008).

After the United States gained her sovereignty from the British, but before it was universally mandated, schooling took place in one-room schoolhouses, so that children could have the opportunity to become a, "body of loyal and productive citizens" (Urban & Wagoner, p. 8). In the 1830's, in response to the Industrial Revolution and under the leadership of Horace Mann, education became universally mandated, paid for by the state, conducted in large buildings with classes segregated by age, for the purpose of helping, "children learn how to lead moral lives and develop into trained, qualified workers" (Michaud & Scruggs, 2012, p. 20).

Due to the Industrial Revolution, vocational education became part of the general education school system in the early 1900's for students to learn the new skills required for the brand-new manufacturing trades (Repetto & Andrews, 2012). By the 1960's, however, secondary general education had already shifted its emphasis from practical skills and job specific training, to more intellectual development and college preparation for some, and *general track* courses for many. In attempts to better focus the secondary educational system, career development courses were reemphasized, once again, in the

1970's. Vocational Act of 1963 (PL 55-210) authorized federal funding to be provided to

the public schools for career education programs linked with vocational education. The

1968 Amendments to this (PL 90-210) mandated and funded these programs to include

students with disabilities (Havranek, Field, & Grimes, 2004; Kolstoe, 1996; Neubert,

2012; Repetto & Andrew, 2012).

By 1979, 42% of secondary students were taking general program courses which

included remedial English and math, work experience outside the school, and physical

and health education (National Commission on Excellence in Education, 1983).

Vocational education was expanded and redefined in later years into Career and

Technical Education programs. These programs were organized around career clusters,

provided work-related education to both high school and postsecondary students, and also

included students with disabilities (Repetto & Andrew, 2012).

A Nation at Risk

For a variety of reasons, the general public education system in the United States

struggled to regain purpose and disciplined excellence following a period of educational

reform efforts.   Thus, in 1981 President Regan commissioned a committee to spend 18

months investigating the quality of American education. The published report, *A Nation

at Risk: The Imperative for Educational Reform,* was released in 1983 (National

Commission on Excellence in Education, 1983). Among the findings of the report:

- International comparisons of student achievement, completed a decade

     ago, reveal that on 19 academic tests American students were never first

or second and, in comparison with other industrialized nations, were last seven times.

- Some 23 million American adults are functionally illiterate by the simplest tests of everyday reading, writing, and comprehension.

- About 13 percent of all 17-year-olds in the United States can be considered functionally illiterate. Functional illiteracy among minority youth may run as high as 40 percent (United States, 1983, p. 8).

In response to this alarming report, laws such as the School-to-Work Opportunities Act of 1994, Goals 2000 (1994) and the No Child Left Behind Act (2001) were enacted at the Federal Level, to be carried out by the states. Career education models that developed in response to the School-to-Work Opportunities Act focused on changing the purposes of education from a relatively narrow focus on intellectual development to also explicitly involve career preparation beyond the traditional limited offerings such as auto shop and culinary course:

…integrated academic and vocational curriculum, individualized learning plans, contextual (applied) learning that focuses on problem-solving, interdisciplinary courses, social service support, flexible scheduling, instruction sequenced around a career major, vocational experiences, worksite mentoring, comprehensive counseling and skill certification (Texas Public Policy Foundation, 1998, Section II, para 1).

Goals 2000, passed in 1994, encouraged state and local school districts to *voluntarily* participate by designing content and *opportunity-to-learn* standards for

certification by the National Education and Improvements Council (NESIC), a nineteen-member committee appointed by the president (Heise, 1994). A few years later, the No Child Left Behind Act of 2001 (NCLB) *required* the states to individually implement a system of standards, assessments and accountability to ensure that all students, in particular those low-achieving students in high-poverty schools, be challenged to reach proficiency in language arts and maths by 2014 (Education Trust, 2004; Forte, 2010; Michaud & Scruggs, 2012; Schraw, 2010).

It was during three decades of changing purposes, strategies, and curricula that general and special education intersected officially and legally (Gerber, 2011; Michaud & Scruggs, 2012; Urban & Wagoner, 2008). The passage of Section 504 of the Rehabilitation Act in 1973 had ensured that all students, including those with disabilities, could receive a free and appropriate education (FAPE) through any institution that received federal funds. General education classrooms which were struggling to not only improve basic functional skills, as well as job and/or college preparation for *all* students, were now challenged to provide individualized special education services for children with varied disabilities so that they too could reach their maximum potential. These challenges will be discussed in a subsequent section.

Vocational Rehabilitation

Elliot and Leung (2005) define vocational rehabilitation (VR) as, "the provision of some type of service to enhance the employability of an individual who has been limited by a disabling physical condition" (p. 320). These services have been provided

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by social, private and public agencies through the coordination of expertise from the fields of medicine, education, and psychology.

Prior to the 1900s in the United States, services were provided by organizations such as the Red Cross or the Salvation Army, and by institutions founded by reformers like Thomas Gallaudet, Doretha Dix, Samuel Gridley Howell, and Washington Gladden (Elliot & Leung, 2005). The federal government became involved for the first time under President Theodore Roosevelt with the passing of the 1908 Federal Employees Compensation Act. This act helped federal workers in hazardous occupations receive rehabilitation after suffering job related injuries. By 1921, almost all states had passed some form of legislation for worker compensation. Under the Smith-Hughes Act of 1917 the federal government provided matching funds for the states in order to start vocational education programs under the new Federal Board of Vocation Education (Elliot & Leung, 2005; Havranek, Field, & Grimes, 2005).

At the end of World War I, the Soldiers Rehabilitation Act (1918) was passed to provide funds for the rehabilitation of returning disabled veterans. The Federal Board of Vocation Education also administered these services to returning soldiers. The Smith-Fess Act of 1920 expanded these rehabilitation services to any persons with physical disabilities (Elliot & Leung, 2005; Havranek, Field, & Grimes, 2005; Smits, 2004).

The labor shortage during World War II highlighted the need for rehabilitation for individuals diagnosed with intellectual disabilities (ID) and severe mental illnesses (SMI), for it was recognized that with proper training and support, these individuals could be successfully employed, and therefore fill the job vacancies caused by war. To

address this concern, the federal government passed the Barden-Lafollete Act in 1943 which expanded Vocational Rehabilitation services to these two populations (Elliot & Leung, 2005; Havranek, Field, & Grimes, 2005; Smits, 2004).

The Vocational Rehabilitation Act of 1954 was intended to further expand services to those diagnosed with ID and SMI. Unfortunately, such was not the case as Kolstoe (1996) indicated. In fact, Vocational Rehabilitation agencies provided very little additional for these populations until Congress passed the Vocational Education Act of 1963. Five years later, these supports were augmented when the necessary funding was appropriated in the Act's 1968 amendments.

In 1979, the Office of Special Education and Rehabilitation Services (OSERS) was formed as part of the Department of Education. OSER continues to involve three main programs designed to assist individuals with disabilities and their families. The first is the Office of Special Education Programs (OSEP) that designs programs for children with disabilities from birth to 21 through the Individuals with Disabilities Act (IDEA). The second program is the National Institute on Disability and Rehabilitation Research that conducts research in multiple fields in order to inform and assist inclusion, integration, employment, and independent living for individuals with disabilities. The third program is operated by the Rehabilitation Services Administration (RSA) that funds state rehabilitation agencies to help individuals with disabilities find employment and live independently (Office of Special Education and Rehabilitative Services, http://www.allgov.com/departments/department-of-eduservices?agencyid=7372).

The Workforce Investment Act of 1998 (WIA) provided an additional federal, legal mandate for interagency collaboration to ensure seamless transitions for youths with disabilities in particular, and so-called *at-risk* youths, in general. "WIA is intended to serve youth and adults with multiple barriers to employment through a broad array of services delivered in a one-stop format" (Noonan & Morningstar, 2012, p. 314). With WIA support, counselors provide interview coaching and support the job exploration and selection process. A rehabilitation counselor is also on site to help with modification, accommodation and technical support suggestions that might be needed. If an individual chooses to disclose their disability, "…the One-Stop Centers are obligated to provide physical and programmatic access to all of the services for which the youth is eligible" (Luecking & Buchanan, 2012, p. 357).

In 2014, the Workforce Investment Act of 1998 and the Rehabilitation Act of 1973 were reauthorized into the Workforce Innovation and Opportunity Act of 2014 (WIOA). WIOA puts special emphasis on competitive integrated employment; employment which takes place in inclusive work settings, includes people without disabilities, and pays competitive wages to all employees.

Federal money has been allocated in every state to assist people with disabilities transition to Postsecondary Education and competitive integrated employment. Vocational Rehabilitation Services (VR) in each state are to make annual reports on how many individuals with disabilities enroll in, and complete Postsecondary Education programs. VR programs are to also train their personnel on strategies and practices to

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assist people with disabilities (including intellectual disabilities) to take part in

Postsecondary educational experiences (Gamel-McCormick, 2016).

Special Education and Career Development: Intellectual Disability

  Nineteenth to mid twentieth century. In the early nineteenth century, before

general education was mandated in the United States, special education options were

provided on an irregular basis for individuals with visual or hearing impairments, mild to

severe retardation, or emotional disabilities in residential programs (Michaud & Scruggs,

2012; Osgood, 2008). Stark, Schlalock, and Berland (1986) indicate that the first

institutions in this country were intended to provide a vocational emphasis for youth,

especially for those with deafness or blindness, however, others soon focused solely on

restraint rather than habilitation.

  After 1918, when general education became mandated for all children and the

Industrial Revolution vocational paradigm had been set in place, individuals with

disabilities were also sent to the general education classrooms. If they caused what a

teacher conceived of as an *undue burden*, however, they were either expelled from school

or placed into segregated classes (Michaud & Scruggs, 2012; Zigmond & Kloo, 2011).

  Though the principle of habilitation and education for individuals with

intellectual disabilities had begun in the mid-19th century, the movement suffered a

significant setback when this ethos was replaced by, "the focus on eliminating these

groups of human beings from society to avoid 'contaminating' the general population"

(Stark, Schlalock & Berland, 1986, p. 275). This eugenic orientation subsided by the late

1920s, to be replaced by an emphasis of habilitation within segregated institutions for this population until the mid-1950s.

During the 1950s, rehabilitation services, research, and training were expanded through the National Office of Vocational Rehabilitation. Subsequently, occupational training for people with disabilities began within sheltered workshop environments using the behavior modification principles based on works of Pavlov's conditioning and Skinner's behavior analyses (Stark, Schlalock & Berland, 1986).

Kolstoe (1996) reflects upon the journey that occupational training for those with intellectual disability has taken in the United States in the previous four decades. He begins by referring to a training and transition program in New York City in the 1940s for children labeled as *mentally retarded*. It prepared them for work in the needle trades and service industries, however, Kolstoe (1996) noted that nothing was duplicated in other public schools throughout the country at that time. In fact, he observed that it wasn't until after World War II was over, that agencies recognized that if this population received unique services, they could compete for jobs against individuals without disabilities.

Following World War II, the Division of Vocational Rehabilitation was subsequently empowered to supply services to the population with intellectual disabilities in the early 1950s. However, as was indicated in the last section, very little was acted upon until the 1960s. For illustration, Kolstoe (1996) described his personal experience with the only four existing institutional programs in Illinois in the early 1950s. He contended that these programs exemplified the type of services being provided nationally

at the time. Two of these programs specifically designed for individuals with deafness or

blindness trained clients for independent living in the outside community, including

preparation/training for earning a living. Conversely, the other two programs designed

for individuals with intellectual disabilities trained residents for jobs within the

institution, but did not prepare them for an independent life in the society at large.

According to Kolstoe (1996), a combination of several contributions led to

Congressional mandates to the states to formulate plans to assist individuals with

intellectual disabilities (then referred to as "mental retardation") in the 1960s. The first

was Ruby Jo Reeves Kennedy's 1962 longitudinal study (Kennedy, 1966) which

recorded the vocational and social adjustment of two demographically similar groups of

people from Connecticut. Each group contained 150 individuals, but one had individuals

with intelligence quotients (IQ) less than 75, while the other had individuals with IQs

greater than 75. Both groups were studied first in the 1940s and then in the 1960s.

Kennedy's study showed that though the individuals in the group with the lower

IQs were employed at simpler jobs, about the same percent from each group were

employed and got promoted to jobs with greater responsibilities within the 20-year span.

"In all, the picture was one of individuals who were responsible, quiet, dependable

citizens who lived rather simply, but served society well" (Kolstoe, 1996, p. 113).

Secondly, the results of the study conducted by President Kennedy's President's Panel on

Mental Retardation report (John F. Kennedy Presidential Library & Museum, n.d.) on the

problems associated with intellectual disabilities nationally and abroad provided

additional data. Lastly, the National Association for Retarded Children began to not only

encourage the expansion of services for this population, but more importantly document both the economic and humanitarian benefits of these services to society.

Based upon these types of reports that highlighted the benefits of preparing and supporting people with intellectual disabilities to be productive members of the workforce and advocacy, Congress passed the Vocational Education Act of 1963 and then followed through with the necessary funding appropriations in 1968 amendments (Kolstoe, 1996; Smits, 2004), as was previously mentioned. This mandate, combined with the corresponding funding, enabled special educators to combine efforts and expertise with vocational rehabilitators for the first time. The development and evolution of Texas' special education program for the *educable students with mental retardation* (now referred to as *students with intellectual disabilities*) exemplifies how this funded cooperation benefited this population.

According to Eskridge and Partridge (1963), Texas' program for students with *educable mental retardation* first began in 1951 with a few scattered classes with watered down curriculum, some of which just provided *babysitting*. In 1954, a state-wide curriculum was designed which utilized seven sequential levels through which students progressed at their own pace of development. What was discovered by the special educators was that additional assistance was needed from the Division of Vocational Rehabilitation in, "such areas as vocational diagnosis, evaluation of employee potential, developing a feasible vocational plan, [and] making actual arrangements and contracts for job training…" (Eskridge & Partridge, 1963, p. 454).

Using these findings as a foundation, Texas initiated a unique program to effectively close the gap between rehabilitation counselors and special educators (Eskridge & Partridge, 1963; Kolstoe, 1996). A formal agreement between school districts, the Division of Vocational Rehabilitation, and the Division of Special Education, allowed these agencies to cooperatively operate a vocational adjustment facility. The Texas model was soon copied by other states which led to three phase work-study programs during the 1960's. Phase one involved sheltered work experiences, Phase two involved "On the Job Training", and Phase three involved permanent placements (Kostoe, 1996). Some schools even required one year of success at the permanent placement job in order for the student to graduate. The program was designed so the students earned enough Carnegie units for graduation, and were also taught the skills required for independent living. By 1974, a study conducted by Management Analysis Center Inc. of Washington D.C. confirmed that there were over 300 work-study programs throughout the nation where special educators were partnered with vocational educators and counselors of the Division of Vocational Rehabilitation (Kolstoe, 1996). According to Kostoe (1996), the work-study models were indeed successful.

One of the most informative studies on the topic conducted during the period examined the effectiveness of a work-study program model was conducted by Chaffin, Spellman, Regen, and Davidson (1971). This study focused on the Kansas work-study project. In 1964, two comparison groups of 30 students were chosen who were demographically comparable in terms of age, IQs, parents' occupational ratings, reading/math/spelling abilities, and gender. The experimental group was enrolled in the

work-study program, while the comparison group was not. Three years later, in 1967, both groups were interviewed in order to determine graduation and employment data. Follow through interviews were conducted two years later in 1969.

The initial results gathered in 1967 showed that 92% of experimental group participants were employed as compared to 68% of the comparison group subjects. This gap closed considerably two years later, however, with the employment of the experimental group *decreasing* to 83% while the comparison group's employment *increased* to 75%. Chaffin et al. concluded that, "… the goal of the work-study program *is not to make students employable;* rather the goal is to *enhance the employability which already exists* for most of the students in the program" (p. 737).

Mid-twentieth century to twenty-first century changes. Despite the success of these programs, they were discontinued in the 1970s due to the conflict about funding and supervision regulations between the Division of Rehabilitation and the participating schools (Halpern, 1992; Kolstoe, 1996). As was previously noted, in 1973, the passage of Section 504 of the Rehabilitation Act ensured that all students, including those with disabilities, could receive a free and appropriate education (FAPE) through any institution that received federal funds. This law guaranteed against discrimination and focused on accessibility and equivalence (Michaud & Scruggs, 2012; Zigmond and Kloo, 2011). Because work experience could now be interpreted as an element of appropriate education for students with disabilities, the rehabilitation agency deemed that it could no longer purchase (or provide federal rehabilitation dollars) to work cooperatively with the schools for these work-study programs (Halpern, 1992). Schools could continue to

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coordinate with the Division of Rehabilitation, however the work-oriented transition programs, whether they were Community Based Vocational Instruction or School-to-Work Youth Apprenticeships, were now required to be designed, implemented, staffed, and paid for by the schools (Black & Salas, 2001; Halpern, 1992; Kolstoe, 1996).

Two years later in 1975, Public law 94-142 (later called the Individuals with Disabilities Acts or IDEA) was enacted to ensure that states, in return for federal funds, would provide all students with disabilities a free and appropriate education in the least restrictive environment (LRE). Each school district had to provide a continuum of alternative placements, but since placement in the general education classroom was seen as a presumptive right, reasons for alternative placements must be clearly documented (IDEA Regulations, 34 C.F.R. 300.551; Michaud & Scruggs, 2012; Rozalski, Miller, & Stewart, 2011; Yell, 1995).

Based upon an Individual Education Plan (IEP), a written agreement between the school and parents, a unique curricula had to be designed which delineated, "the goals of instruction(s), what individual(s) will provide the various instructions, the setting(s) of those instructions, and the means of assessing goal attainment" (Michaud & Scruggs, 2012, p. 22). Educators now were required to shift their focus from programs to students' individual needs (Kolstoe, 1996).

IDEA 1990 and its subsequent reauthorizations in 1997 and 2004 mandated what transition services were to be included in secondary students' IEPs. These changes presented new challenges to educators regarding how to integrate and align special need transition requirements of IDEA with voluntary compliance to high stakes standards of

Goals 2000 (1994), and then to the mandatory requirements of No Child Left Behind Act

(NCLB) of 2001. This integration and alignment had to take place both within the least

restrictive environment of the general classroom, and within the special education

classroom, since the general education curriculum now served as the foundational core of

the special education classroom, as well (Alwell & Cobb, 2006; Izzo, Yurick, Nagaraja &

Novak, 2010; Michaud & Scruggs, 2012; Razeghi, 1996; Scruggs & Michaud, 2009;

Zigmond & Kloo, 2011).

For many schools, credit for course objective mastery replaced workplace

apprenticeship requirements to graduate with a general diploma. "In order to receive a

general diploma, students have to focus on the academic requirements which leave little

or no time for courses in vocational education or for other experiences that relate to social

and independent living skills" (Razeghi, 1996, p. 150). This exclusion of functional and

career related curricula for students with disabilities departed from the research-based

findings that their inclusion is an essential component for these students' successful post-

school outcomes, and contributed to a rise in these populations' drop out statistics, as

well (Benz, Lindstrom, & Yovanoff, 2000; Razeghi, 1996; Wagner, 1991).

When the voluntary participation in Goals 2000 became mandated through the

NCLB Act of 2001, these pedagogical tensions became more ostensible. While IDEA

requires individualized transition services based on a student's goals that match unique

interests, needs and abilities, the NCLB guidelines entail, "uniform learning standards for

all students in the context of standards-based curriculum…" (Izzo, Yurick, Nagaraja, &

Novak, 2010, p. 95). Without the realistic integration of IDEA's protection for

assessments and goals which are personally appropriate to a particular student into NCLB's curriculum and standardized assessment, students with certain disabilities fail to reach the standards of excellence they are capable of achieving. Functional transitional education, which includes community based instruction and perhaps even tiered work experience, is presently difficult to incorporate in a standard high school diploma which also must satisfy current academic requirements (Bentz, Lindstrom, & Yovanoff, 2000; Hasazi, Furney, & Destefano, 1999).

As a result of changing educational policies, there is no longer a working team of vocational rehabilitation specialists and special educators designing and implementing programs specific to the community which are focused on successful, meaningful employment and independence for those with disabilities in general, and intellectual disabilities in particular. Both general and special education curricula must be grounded on the same national curriculum-based standards, and preferably taught in inclusive classes with students without disabilities, which can preclude community based instruction and tiered work experience. It is, therefore, understandable why only 17.5% of people with disabilities ages 16 to 64 were found to be employed as compared to almost 65% of those without disabilities in the same age range in 2015 (United States Department of Labor, 2016), or why among individuals with disabilities, individuals with intellectual disabilities are less likely to be employed (39% vs. 59 – 67%) (Newman et al., 2011).

This coordinated yet separated agency affiliation between school and Vocational Rehabilitation staff produced an expertise gap, especially for those diagnosed with

intellectual disabilities (ID) or developmental disabilities (DD). When focusing on the

unique needs of these populations, Grigal and Hart (2010a) indicate there is a real lack of

expertise and training of both special educators and rehabilitation counselors in job

development skills for these populations:

> …we need to stop expecting special education, transition, and rehabilitation
>
> professionals, who have little training or experience, to successfully help
>
> students with ID get paid jobs. Proper training, guided practice, and most of
>
> all, experience are what are required for someone to become a skilled
>
> employment specialist or job developer (Grigal & Hart, 2010a, p. 270).

In response, programs have started to be developed which maximize transition

success for students with disabilities in general, and those with intellectual/developmental

disabilities in particular. Several models of Postsecondary Education programs have

been established in various states in the past decade. Some have included students with

various disabilities, and many have been designed particularly for those with intellectual

or developmental disabilities. There are models which include students who have not yet

graduated from high school and those which are designed for post high school graduates.

The next section will describe research focused on Postsecondary Education models

designed to serve people with intellectual and developmental disabilities.

Postsecondary education programs. Hanley-Maxwell and Izzo (2011) refer to

current research which supports that postsecondary vocational training has been

correlated with job success, and that programs which blend both academic and

occupational pursuits produce better work related abilities than those which offer either

pursuit alone. This is critically important with the populations which struggle with intellectual or developmental disabilities.

An *intellectual* disability involving cognitive functioning limitations that are global in nature, is considered a *developmental* disability, since it began before an individual was 18, and restricts that person from adapting to societal demands (Wehmeyer & Obremski, 2010). An individual with an intellectual disability can be challenged with making sense of things, planning, learning from experience (generalizing), thinking about complex or abstract ideas, and solving problems. Despite these overarching challenges, Wehmeyer and Obsenski (2010) refer to considerable research which indicates that these challenges can be diminished:

> Nevertheless, a nearly fifty-year old literature base pertaining to education and rehabilitation has shown that people with intellectual disability can improve their cognitive functioning and learn skills and abilities that enhance their functioning in virtually any domain, from employment to academics (p. 8).

Based upon research that indicates that cognitive improvement for those with intellectual or developmental disabilities has been particularly observed when this population reaches their late teens to early 20's, Brown (2010) postulates that these years should be optimized to further their education. Such adult programs need to provide for individual choices, consider variable learning abilities and skills, and especially provide education in the areas of social competency and community living (Benz, Lindstrom, & Yovanoff, 2000; Brown, 2010).

The Developmental Disabilities Assistance and Bill of Rights Act of 2000 provided the funding for State Councils on Developmental Disabilities, and University Centers for Excellence in Developmental Disabilities Education (UCEDDs) (Administration for Community Living, 2013; Lee & Will, 2010). Seven UCEDDs have partnered with each other and are conducting action research to identify and address gaps, provide training and technical assistance, and disseminate materials nationwide through the project website (www.thinkcollege.net) regarding postsecondary education program options (Grigal & Hart, 2010b).

The Higher Education Opportunity Act of 2008 (HEOA) was enacted which now allows students diagnosed with an intellectual disability to be eligible for Pell Grants, Supplemental Educational Opportunity Grants, and Federal Work-Study Programs, if they are enrolled in certified Comprehensive Transition Programs (CTPs). CTPs are offered at some form of higher education institution and provide continuing education, support, and curriculum to help students with intellectual disabilities obtain suitable employment. In these programs, one half a students' academic pursuits, whether classes or at work-sites, must include non-disabled individuals. The availability of those funds to help cover the cost of Postsecondary Education programs' tuitions for this population greatly facilitates the expansion of postsecondary education opportunities.

The Higher Education Opportunity Act of 2008 also provides funding for model transitional post-secondary programs for students with intellectual disabilities, referred to as Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID). The Secretary of Education chooses the grantees based on evenhanded

geographical distribution in areas which are underserved by these types of programs. Preference must also be given to program applicants which contain at least one of several components, including: 1) supports and services for academic and social inclusion in courses, and/or extracurricular activities at the Institute of Higher Education (IHE); 2) work and career skills that lead to employment; and 3) partnership with relevant agencies.

The TPSIDs are evaluated and provided technical assistance by the National Coordinating Center, which was awarded to Think College at the Institute for Community Inclusion at the University of Massachusetts Boston. In 2010, 27 model programs were granted funds to support programming for a period of five years (National Coordinating Center Accreditation Workgroup, 2016). By the fall of 2010, Grigal and Dwyre (2010) indicated that there were already over 250 college programs that served students with intellectual disabilities.

Grigal and Hart (2010b) describe the models and options that are currently being utilized by Postsecondary Education programs. Historically there were three basic models that these programs can follow. These models are the *mixed/hybrid* model, the *substantially separate* model, and the *inclusive individual support* model. The *mixed/hybrid* model can offer a variety of ranges of participation for students with intellectual disabilities in typical academic classes (audit, credit, noncredit) and social activities with students without disabilities, however students with disabilities often take their own classes to prepare them for functional life skills.

The *inclusive individual support* model provides support services such as educational coaching, access to special technology, tutoring designed to support students

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with disabilities to participate in inclusive courses, certificate programs, degree programs (audit, credit, noncredit) and employment experiences (internships, apprenticeships, work-based learning) that match their student-identified career goals. This model requires an alternative to the traditional entrance criteria and the establishment of an interagency team.

In the *substantially separate* model, which is currently being phased out, students with disabilities only take classes with other students with disabilities. These courses can range from classes that focus on developing functional life skills and vocational preparation classes to an entire coursework curriculum designed especially for those students with intellectual disabilities. Within these programmatic models, students may or may not have had access to social activities with students without disabilities. As more programs were designed considering the policies of Higher Education Opportunity Act (HEOA) of 2008, the *substantially separate* model was no longer considered a viable model and as mentioned above, is gradually being phased out (National Coordinating Center Accreditation Workgroup, 2016).

According to research conducted by Grigal and Deschamps, 2012, all three of these models will work with any of the three postsecondary education program options involving dual-enrollment, sponsored programs/services for adults, or student/family initiated programs. There is little found in the literature that describes delineations between the student/family-initiated option and the other two approaches since this third option involves an individualized agreement reached between institution personnel and a

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student/family. The following describes characteristics of dual-enrollment programs and sponsored programs/services for adults.

Dual-enrollment program. The dual-enrollment option allows students from 18-21 years old, who are still receiving transition services from their school system under the Individual with Disabilities Act (IDEA) of 2004 (Pl 108-446), to complete their last two to three years of secondary education in a college setting. The local school system participates in providing supports and services to individuals since students still remain part of the system as secondary level students. Students participate in activities related to their transition goals such as academic courses, learning self-determination, job shadowing/internships, competitive employment, and social/community skills acquisition needed for adult living (Hart & Grigal, 2010). The dual-enrollment option can provide a multi-faceted transition curriculum taught by trained personnel in an adult environment; an environment which also requires that the students utilize the new abilities as they are acquired, thereby increasing the probability of skill acquisition.

The Youth Transition Program (YTP) that begun in 1990 in Oregon with seven schools is an example of the successes that can be provided by a dual-enrollment program that provides services to students with disabilities including those with intellectual disabilities. Benz, Lindstrom, and Yovanoff (2000), refer to the results of two government studies conducted in 1995 which documented the YTP's successes. They found that 90% obtained high school completion; 82% obtained competitive employment and/or postsecondary training placement; 80% consistently remained employed and/or continued training two years after completing program; and that the outcomes for the

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YTP participants were statistically significantly above both statewide samples of students who either received special education services, or Vocational Rehabilitation services, but were not YTP participants.

Benz, Lindstrom, and Yovanoff (2000) highlight the program's elements. YTP is operated with collaboration between the Oregon Department of Education, the Oregon Vocational Rehabilitation Division, the University of Oregon, and local schools throughout the state. Students with disabilities who are at risk for not completing high school, or transitioning successfully, using the supports typically available through general education, special education, and school-to-work programs, are referred to the YTP for their last two years of high school. The services can continue through their early transition years when needed.

YTP Transition Specialists work under a special education Teacher-Coordinator and a Rehabilitation counselor to design an individualized plan with students which include academic, vocational and independent living education. The students receive paid job training, are helped to secure employment, or enter additional postsecondary training, and can receive follow-up services for two years if needed or desired. The University of Oregon provides model development, training, technical assistance, evaluation, and revision based on ongoing promising practices. State and local school and rehabilitation agencies provide funding for the YTP program.

According to the Youth Transition Program page on the University of Oregon website (http://www.ytporegon.org/) the YTP program currently services about 120 schools statewide. Designed in 1990 before the Higher Education Opportunity Act of

2008 was enacted, the YTP program was designed using the *substantially separate* model. The model has remained consistent through the years.

   Sponsored Programs/services for Adults. Adult service agencies or other college or university partners that provide Postsecondary Education programs for adult students with intellectual disabilities can start sponsored programs for adults. The exceptions would be those adult programs which also serve students who are initially dual-enrolled, but then continue to receive services as adults upon leaving high school. The Institutions for Higher Educations (IHE) which provide these programs can be two-year, four-year, or technical schools. Higher education programs offer the same range of services that the dual-enrollment programs do, however, the local school system does not participate with funding or personnel since the students have already graduated high school and can no longer be covered by the transition services provided under the federal legislation IDEA 2004. In fact, high school graduate students with disabilities are currently only legally protected under the provisions of the American with Disabilities Act of 1990, that allows them reasonable accommodations if they are otherwise qualified, but those accommodations do not include specially designed instruction nor integral course changes.

   If the adult program has received certification from the Department of Education as a Comprehensive Transition Program (CTP)*,* participating students can then receive financial aid to attend. These funding options include programs such as Pell Grants, Supplemental Educational Opportunity Grants, or Federal Work Study Programs to help with the cost of tuition (Hart & Grigal, 2010).

Weir, Grigal, Hart, and Boyle (2013) provided a profile of five different Postsecondary Education programs for adult students with intellectual disabilities, viewing each program through the framework lenses of four standards of quality practice (Academic Access, Career Development, Campus Membership, and Self-Determination), and four standards of elements of service/infrastructure (Integration with College Systems and Practices, Coordination and Collaboration, Sustainability, and Ongoing Evaluation). Here, basic descriptions of two of their profiled programs will highlight the variability possible for adult Postsecondary Education programs.

Two-year CTP mixed/hybrid program. The first program is the West Carolina University's Participant Program, described here based on a profile provided by Weir, Grigal, Hart, and Boyle (2013). The Participant Program has been certified as a two-year Comprehensive Transition Program, and is based on the mixed/hybrid model.   To receive a University Participant Certificate of Accomplishment from the University's Division of Continuing Education, students must meet 80% of each component of their Individual Plan for College Participation each semester, and complete over 1800 hours of learning activities which include: 1) college course access, 2) personal development skills, 3) community participation skills, 4) vocational preparation skills, and 5) social participation and learning.

The specific activities in each of these areas vary per individual student as designed by their individualized plan. The choices of the classes that the students participate in are driven by their career goals, and are taken either at Western Carolina University, or at the local community college.

Each student rotates through job sites located on campus, and are expected to obtain a paid, or unpaid, internship in the community their final semester. A career development coordinator develops job adaptations and assists students' transitions to paid employment and community living. Follow-up vocational support is also provided for one year after graduation.

Three-year inclusive individual support program. The second program description, also based on the profile contained in the Weir, Grigal, Hart, and Boyle (2013) article, is the Supported Higher Education Project (SHEP) of University of Kentucky and Northern Kentucky University. This three-year program for high school graduates diagnosed with intellectual disability is based on the Inclusive Individual Support model, and provides outreach and support to colleges and universities across Kentucky so these students have a choice of college programs.

Student participants register for three to six credit hours in 100 and 200 level courses, taking no more than 30 credits during the three years, in order to receive a certificate in College to Career Studies. Students are supported by peer mentors who are majoring in education, and attend inclusive classes selected by a person-centered planning process.

The SHEP program created a pilot program with Vocational Rehabilitation so that students can receive its job training and postsecondary education support concurrently, rather than only being able to receive job training support after postsecondary education was completed. Students must complete at least three supervised internships in order to obtain their College to Career Studies certificate. "SHEP staff work with supported

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employment agencies to ensure that each student's learning objectives are related to his

or her internship or work study, that progress is systematically documented, and that gaps

in support are identified" (Weir, Grigal, Hart, & Boyle, 2013, p. 20).

Four year CTP mixed/hybrid program. This program was profiled by the

researcher, through her personal experience, as well as research on the program website.

This sponsored adult program has been certified as a Comprehensive Transition Program*,*

and was designed based on the Mixed/Hybrid model to serve 18 to 23-year-old high

school graduates with intellectual or developmental disabilities. Both on and off campus

specialty residential options are available for students who desire them, with university

students providing day and overnight residential supervision and guidance.

Undergraduates and graduate students can apprentice in many capacities such as

instructors, resident advisors, internships, practicum, licensures, independent studies,

field work, mentors, Best Buddies, and volunteers. A Certificate of Completion is

awarded to students who have been enrolled for four years, or eight semesters within a

five-year period, and have completed the requirements in the three areas of importance:

1) coursework, 2) catalog concentration, and 3) work specialty.

The coursework area of importance is comprised of required and elective classes

selected from the program's curriculum which was designed especially for those students

with intellectual disabilities. These classes are taken with other students with disabilities

in the program, and are taught by trained graduate students.

Based upon the Person-Centered Planning meeting, students are required to take

at least one semester of the following courses: (a) Human Sexuality and Personal

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Relationship Fundamentals, (b) "University" Exploration, (c) Developing Self-Regulation Strategies, (d) Employment, (e) Independent Living, (f) Community Access, (g) Fitness, and, (h) Preparation and Planning for Study. Highly recommended, but not required, are one semester courses of: Writing, Mathematics, Public Speaking Basics, and Banking.

Starting the second semester of their first year, students are required to participate in, or audit, one to two University catalog classes per semester, in order to fulfill the second area of importance, the catalogue concentration. During the Person-Centered Planning Meetings, students work to establish an area which they would like to study while at the University, enabling students to explore areas of knowledge. A support staff attends the classes with the student, and there is also a two-hour support class where homework and projects can be completed. Concentrations of three, four and five classes from the same area are noted on the students' Certificates of Completion.

The third area of importance is the work specialty area. Students begin their first semester with a classroom based employment class so that they will learn how to refine resumes and work behaviors, and discuss various employment possibilities. Work experiences through on campus sites begin their second semester, and continue through the end of their second year.

Job placements are determined based on student interests discussed in Person Centered Planning meetings, seniority, and availability. Students are assigned a trained one-on-one Employment Support staff who accompanies them to their work site, and assists them with recording their work skill development progress. Employment Support

staff work site presence can be modified, faded, and even removed consistent with the independence readiness consensus of Support Staff, Employment Coordinator, work site, and student.

Two times per semester, the students will fill out a "Request for Time-Off" form. This allows students time to remain in the classroom in order to update his or her professional portfolio and participate in various activities such as role-playing common workplace scenarios to reinforce adaptive employment skills.

During their third and fourth years, students will work at off campus sites based on seniority, interest, and availability. If a student has a particular interest in a field or placement that is not available, the Employment Coordinator will work with the student in order to pursue opportunities. For those students who have proven their work-ethic and reliability, internships to work at different offices with a stipend are also available.

Beginning in 2014, the Certificate of Completion also demarked a Work Specialty Area based upon students' employment experiences, in addition to the aforementioned documentation of Catalog Class Concentrations. Currently, Specialty Areas being pursued by students are: (a) Public Works, (b) Community Outreach, (c) Office/Clerical, (d) Customer Service, and (e) Child Care.

Because of the residential options this program has students from various states throughout the country, their transitional preparations are extremely varied. While some students have had extensive opportunities to explore and try out job options through internships, work study tracks, and volunteer work, others have had very little. At this juncture, only job preparation is completed by the end of the program, but actual

employment placement is taken care of by the student, family, and Vocational

Rehabilitation agency.

Given the new program models that are now available for individuals with

intellectual disabilities to prepare them for suitable employment and independent living,

it is still necessary to discover whether there are any additional supports available to help

this population obtain and maintain meaningful employment. There are several factors

that Snell et al. (2009) indicate which contribute to this populations' under or

unemployment, among which are: 1) inadequate training and on-the-job supports, 2) lack

of support to become more self-determined, and 3) the reality that barriers related to

cognitive limitations are less likely to be accommodated than barriers related to physical

limitations.

Self Determination: A Best Practice Career Model

If one regards *self-determination* through the lens of the ecological model, it can

be seen as a, "product of both the person and the environment—of the person using the

skills, knowledge, and beliefs at his/her disposal to act on the environment with the goal

of obtaining valued and desired outcomes" (Wehmeyer & Abrey, 2013, p. 400). The

ability of an individual to make informed choices is a necessary component of being a

self-determined individual; an individual who acts, rather than is acted upon. The

promotion of self-determination through choice opportunities is not only considered best

practice in the field of disability interventions, but has been correlated with the

enhancement of the quality of life (Brown & Brown, 2009; Neely-Barnes, Marcenko, &

Weber, 2008; Wehmeyer & Abrey, 2013; Wehmeyer, Fields, & Thoma, 2012).

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Based upon their conceptual framework as well as those of others, Brown and Brown (2009) indicated that choice must consist of two key components: (a) availability of options, and (b) the choice-making process. Though the availability of a broad range of options is preferable, at the very minimum the individual must be able to select *yes* or *no* to at least one possibility that is familiar, for unfamiliarity reduces the power to choose. "Familiarity, and the gaining of familiarity, is particularly important to consider when working with those who may have had limited life experience and may have low ability to imagine themselves in new situations" (Brown & Brown, 2009, p. 13).

The process of choice-making requires that the individual can make up their own mind about the selection without coercion, take initiative, and effectively communicate the selection to others. When considering assisting individuals with intellectual and/or developmental disabilities to make choices about possible job opportunities, it is therefore important to ensure that there are options for students to select from which are familiar to them that they can freely take the initiative with the selection, and effectively communicate that choice to others.

The Self-Determined Career Development Model (SDCDM) has three phases which address the following areas: "(a) What are my career and job goals? (b) What is my plan? and, (c) What have I achieved?" (Wehmeyer et al., 2009, p. 120). The first objectives of Phase One of the model involves: (a) the individual discovering careers or jobs that they would be interested in, (b) discovering what aptitudes or skills the job entails, (c) comparing that to the aptitudes the individual possesses, and (d) exploring modifications and/or accommodations needed so there could be a match (Wehmeyer et

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al.). Tools that could assist them in discovering jobs that match their specific interests, proclivities, and aptitudes might be beneficial at this stage of the self-determination process.

Vocational Job Search Tools

Ellerd (2002) refers to various studies and authors regarding the most functional way for individuals with such disabilities to gather information on job preferences in order to make well informed choices. Reference is made to Wehman (1992) and others who indicate that job preferences are best chosen through community-based job placements. With this type of job placement, individuals can experience all the complexities of the work environment options, and their performances can be evaluated, as well.

To overcome the barriers of providing supervision and supporting expenses for multiple trial job placements, tools which can provide job options to choose from would help narrow down the best possibilities before trial placements would occur (Wehman, 1992; Wehman, Moon, Everson, Wood, & Barcus, 1988). According to Ellerd, (2002) the format of these tools should make it easy for individuals to become familiar with the job selections from which they are choosing, allow the individuals to make choices without coercion, allow individuals to effectively communicate their choices, and indicate what supports or further training might be necessary for them to be successful in the work options of their choosing.

Tools that require at least a fourth-grade reading level tend to preclude the many individuals with intellectual and developmental disabilities who cannot effectively read at

that level (Morgan, Gerity, & Ellerd, 2000). Similarly, tools which only use line

drawings or pictures to depict job options have been found to have inconsistent and

confusing results with people with intellectual disabilities, due, in part, to the ambiguous

lack of information they provide (Ellerd, 2002; Stock, Davies, Secor, & Wehmeyer,

2003; Thomas, 1996). However, job preference tools that use videos of job options from

which individuals can choose, and require little or no reading ability, have been found to

produce fairly consistent results (Morgan, Gerity, & Ellerd, 2000). Researchers such as

Morgan (2008), Hanley-Maxwell & Izzo, (2011), and Neubert, (2012) have pointed out

that it is preferable if a job preference tool indicate the degree of a match of an

individual's abilities, with a job's required skills. These data are important in that they

enable the individual and transition specialists to plan for further training and to better

anticipate what modifications or adaptations would be needed or possible.

Reviewed and published tools

In 2011, to find journal articles regarding aptitude assessment tools useful for

vocational training, the researcher performed an electronic search of ERIC databases

including Academic Search Complete, PsychInfo, and Web of Science, searches of *Buros*

Mental Measurement Yearbook as well as the following journals: *Mental Retardation,*

Journal of Developmental and Physical Disabilities, American Journal on Mental

Retardation, Journal of Employment Counseling, Education and Training in

Developmental Disabilities, Journal of Rehabilitation, Journal of Vocational Behavior,

Journal of Career Assessment, and *Journal of Intellectual and Developmental*

Disabilities. Full or truncated versions of the following search terms were used:

vocation, assessment, assessment tools, vocational assessment, special education, career

assessment, intellectual disability, mental retardation, skill requirements. Searches were

conducted in *Buros,* Google Scholar, and the aforementioned databases about specific

assessment tools that were discovered, including: Valpar, Valpar Work Samples,

ValparPro 3000, CareerScope, Apticom, GATB, DAT, PAS, SAM, TAP, VITAS, and

McCarron-Dial. The researcher performed reference and citation searches on all useful

articles. In addition, the researcher spoke with vocational rehabilitation assessment

counselors to discover what variety of tools they use. The researcher spoke with two in

Virginia, two in West Virginia, and one in Ohio.

The researcher used three publications which reviewed a group of career

assessment tools that were available which included validity/reliability/usability

information in the reviews themselves (Kapes & Mastie, 1988; Kapes & Whitfield, 2002;

Whitfield, Feller, & Wood, 2009). The following table designates the reviewed tools that

were listed under the category of tools for special populations, or use picture or video

formats, so could be suitable for this demographic. The table shows: (a) whether picture

or video format is used; (b) whether aptitudes related to job skill requirements are

evaluated and matched with preferences; and (c) what reading level, if any, is required.

Table 1

Job Preference Tools

Tool	Format	Aptitude	Reading Level
Ashland Interest Assessment	Pictures	No	3rd grade
Career Assessment Battery	Videos	Not reported	Not reported
Career Occupational Preferences	Pictures	No	4th-6th grade
Career Scope	Pictures	Yes	4th grade
Explore World of Work	Pictures	No	Not reported
Geist Picture Interest Inventory	Pictures	No	Not reported
Pictorial Inventory of Careers	Videos	Separate	Not required
Reading Free Vocational Interest Inventory 2nd edition	Pictures	No	Not required
Valpar Aviator	Pictures	Yes	Audio available
Wide Range Interest & Occupational Test 2nd edition	Pictures	No	Not reported

The *Pictorial Inventory of Careers* provides live action video segments of 119 job options, and reading is not required. Though it does not provide an evaluation of job skill aptitudes, the students can be assessed by another assessment (TAP) and the results can be coordinated. The main drawback is that one needs to be trained in order to administer

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both tools, and both the training and licensing purchases are costly. The *Career*

Assessment Battery provides 40 minutes of live video segments of job options, however,

not only is it costly, but since the reading level is not indicated, it is unclear whether it

would be appropriate for the demographic with intellectual disability.

      Tools not yet reviewed. There are several other tools which use the video

format, are appropriate for the population with intellectual or developmental disabilities,

but have no published reviews. Below is an overview of two of them.

      The Choose and Take Action software.   The Choose and Take Action software.

(Martin et al., 2004) contains 31 video clips, 20 seconds in length, which represent 14

employment settings, 15 activities, and 12 job characteristics of entry level jobs. The

videos are randomly paired, and the students must choose one out of the pair. Their

choices continue until there is only one job activity selected. The student then makes

arrangements to either watch or preform the job activity in the community, and then

record their evaluations. The authors suggest that for proper validity the process should

be repeated at least five times. Though there are most certainly benefits to this software,

the choices are limited, and the individuals' aptitudes are only evaluated through trial and

error.

      The Your Employment Selections program. The Your Employment Selections

(YES) programs contains two to four minute videos of 120 jobs that were selected based

on a national survey of jobs where clients with intellectual or developmental disabilities

had already been placed, as well as those from the emerging market that: (a) did not

require a bachelor's degree at entry level, (b) did not involve frequent or exclusive

responsibility for the lives of others, and (c) was not only available regionally or seasonally (Morgan, Gerity, & Ellerd, 2000). The videos illustrate job task priorities based upon *Dictionary of Occupational Titles* job analyses (Farr & Ludden, 1998), and portray critical variables such as: (a) typical environments, (b) noise levels, (c) illumination, (d) pace, (e) numbers of coworkers, and (f) members of the public. A narrator's voice accompanies each video, with close captioning, and describes the critical tasks. Selections can be made based upon work environments (e.g. indoor/outdoor, light work/heavy work) or based upon work categories (e.g., clerical, retail, mechanical, service) (Morgan, Gerity, & Ellerd, 2000).

One hundred and six *Occupational Information Network* (O*NET) dimensions of knowledge, skill, and abilities weighted for their importance for each job have been imported from the O*NET data base to the www.yesjobsearch.com website (Morgan, 2008; Morgan, 2011). Once a client has narrowed down their job preference selection to no more than three choices, a stakeholder inputs their ratings (*Good*, *Fair*, or *Poor*) for the client on the 106 O*NET based dimensions. The computer multiplies the ratings by the weighted importance of skills required for each job, which results in, "…an index score on the extent to which the job seeker's current skill level matches the job requirements for preferred jobs. The program also generates a list of strengths and weaknesses that may be used by stakeholders for training or accommodation" (Morgan, 2011, p. 27).   By using this tool, a client could gain familiarity with possible job opportunities, as well as information about personal ability matches with the job

requirements. This information could be used before ecological assessments are arranged at the preferred job sites.

A tool, however, is only useful if it can be used by its intended consumer for the purpose for which it was designed. So, for example, a measure that uses sequences of different colored blocks in order to evaluate sequencing aptitude would not produce valid results for an individual who is color blind. It is also only useful if its purpose is needed, and if it is acceptable to use. Answering these questions about a tool, intervention, or procedure is known as discovering its social validity.

Social Validity

The focus of social validity is the usefulness and desirability of changes in behavior and/or the process used to change it (Kennedy, 1992). It was used to evaluate how patients, psychotherapy clients, and consumers/employees were satisfied with treatments or services they received. Social validation was developed and used so society could evaluate independent variables on at least three levels:

1. The social significance of the *goals*. Are the specific behavioral goals really what society wants? Are they important?

2. The social appropriateness of the *procedures*. Do the ends justify the means? That is, do the participants, caregivers and other consumers consider the treatment procedures acceptable?

3. The social importance of the *effects* of treatment**.** Are consumers satisfied with the results, including any unpredicted ones (Wolf, 1978, p. 207)?

From a conceptual perspective, social validation is pragmatically based, for it addresses if something, whether it is a process, intervention, treatment, or tool, is found to be important, acceptable, and effectively useful for those involved. It is a method of determining the opinion about a treatment by those receiving, administering, or consenting to a treatment their perceptions about it. These perspectives are important, since if a particular intervention or treatment is perceived as unfavorable, unnecessary, or its effects are not worth the cost or unpleasantness, even if the intervention is objectively effective, it will probably be terminated, if it is not altered (Schwartz & Baer, 1991). As important as it is, Carter (2010) makes it clear that social validity is intended to be used as a measure. In order to best conduct social validity studies, Fawcett (1991) and Patton (1999) advise that various methods of triangulation be utilized for both validation and enrichment purposes.

Study Preparation and Pilot

The researcher chose to study the social validity of the YES job search tool at the four-year Postsecondary Education Program because the tool used narrated videos of 120 types of jobs where individuals with intellectual disabilities had been successfully employed. The YES tool was also inexpensive, and had a method of aptitude comparison which could be used for screening before on-site trials were initiated.

During the summer session, the researcher contacted several adult students in a Postsecondary Education program for individuals with intellectual and developmental disabilities to ask if they might be willing and able to participate in a pilot study. The researcher was familiar with the students.

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Three students were available to participate. The students completed an assent

form (Appendix K) agreeing to take part in the pilot, while one of each student's parents

completed the assent form (Appendix J), allowing them to participate. The researcher

had collaborated with the program's director in completing the lengthy aptitude protocol

for each student (a necessary component) for two of the students simultaneously, and

with another administrator for the remaining student.   Subsequently, one of the three

students had to cancel her participation because of a conflicting job interview, but the two

remaining students represented both the Medium and High program levels, so the pilot

could proceed.

The researcher input the two participating students' completed protocols into the

YES program software, so that their job profiles with corresponding aptitudes could be

generated immediately after they had made their selections. The pilot students came in

separately to use the job matching program, while the researcher facilitated and assisted.

Each student was allotted several hours, in case they needed to take a break before

completing their selections, but neither student took more than one hour. Before the

student began to watch the job videos on the YES website and make selections, they were

asked to complete the questionnaire and the researcher conducted a semi-structured

interview on the importance of the tool's goal.

After each student had completed watching the videos of job possibilities they

were interested in, and made no more than three final choices, the researcher ran the

program which indicated the strengths and areas that needed additional

training/modifications for their selected jobs. Before the pupil reviewed these aptitude

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matching profile results, he or she completed a questionnaire that asked for their perspectives about the acceptability of the YES tool.

The student then reviewed the aptitude matching profile results, and then the researcher conducted a semi-structured one-on-one interview with the student with the goal of learning about the student's perceptions of the effectiveness of the job profile results. The total time spent by each student which included answering questionnaires, watching videos, making choices, and discussing the results was no more the one hour and a half.

Next, the researcher and the program director discussed the results of the pilot study. They found that the students had enjoyed using the job matching tool, the measures did not need to be amended, since they were easily understood by the students, and measured what was intended, and that both students had discovered new job options that they had never thought about before. It was therefore decided that the YES tool fit the criteria the researcher needed to conduct the study on its social validity for use at this Postsecondary Education program (van Teijlingen & Hundley, 2001).

Summary

Helping individuals with intellectual disabilities obtain and maintain suitable employment is not only beneficial for their well-being, but benefits the whole society. The United States has gone through many different phases, using various methods, milieus, and resources to accomplish this. Even though much research and many tools have been developed to help those without disabilities find appropriate employment, research in, and development of, effective tools to help those with intellectual disabilities

is still just beginning. The social evaluation of a job search tool designed especially for this population, by students, their families, and the staff at a four- year Postsecondary Education program could certainly make a contribution. After completing a small pilot study, the researcher decided that such a study would be realistic and feasible.

Chapter Three

This chapter presents the method for a mixed method study that examined the social validity of the *Your Employment Selections* (YES) program tool at a four-year post-secondary program for students with intellectual or developmental disabilities. It includes a description of the study's setting, its participants, YES program tool, and verification for human study protection and consent. Lastly, it delineates the study's research design, data collection materials, and data analyses.

Setting

The study took place in a four-year (freshman, sophomore, junior, senior) Postsecondary Education Sponsored Adult Program based on the campus of a large university located in the northeastern region of the United States. This sponsored adult program is certified as a Comprehensive Transition Program (CTP), and is a mixed/hybrid model to serve 18 to 23-year-old high school graduates with intellectual or developmental disabilities. A mixed/hybrid model offers the student with disabilities opportunities to participate in academic classes and social activities with students without disabilities, but its students take their own classes separately to help prepare them for functional life skills (Hart & Grigal, 2010).

Both on and off campus residential options are available for students who desire them. University student employees provide day and overnight residential supervision

and guidance. There are also students who commute daily from off campus. The
program staff is comprised of university faculty and graduate students, as well as some
individuals hired from the community just for the program. Program offices, meeting
rooms, and students' residences were used as settings for data collection

Participants

   Students. The 12 student participants were randomly selected from the group of
students who, along with their parents, had signed permissions to participate in the study
during the Fall orientation weekend. There were three students selected from each of the
four program years (freshman, sophomore, junior, senior).

   To randomize the selection of participants in the study, the researcher put the
assent forms face down into four piles according to the year the students were currently
in. She then picked out three forms from each pile. She continued to select from each
pile until there was at least one male participant from each of the four representative
years.

   The students were between the ages of 19 and 26 years old, were in good health,
from a variety of ethnic backgrounds, and were diagnosed with varying intellectual
and/or developmental disabilities. The inclusion/exclusion criteria for participating
students included: (a) permission to participate, and (b) to be at a functioning level for
competitive/supported employment. Competitive/Supportive employment means: (a) all
employees, including those with disabilities receive the same pay, and (b) those with
disabilities can receive the support they need to do the job for which they were hired
(Wehman, Moon, Everson, Wood, & Barcus, 1988).

Data on gender, ethnicity, age, specific disability, intellectual quotient (IQ), year, and grouping (*high*, *medium*, and *low*) was gathered from the students' program files, and is represented in the table below. The program separated the students into high, medium, or low groupings according to the cognitive functioning limitations which necessitated a change in pace, complexity, or other modifications of class materials. The following table the student participant demographic data.

Table 2

Student Participant Demographics

Participant	Gender	Ethnicity	Age	Disability	IQ	Year	Grouping
1.	F	C	25	OHI	69-79	4th	H
2.	F	C	20	Down's	NR	2nd	H
3.	M	B	19	Trisomy 21	63	1st	M-H
4.	F	C	20	ID	67	1st	M-H
5.	F	C	19	OHI	79	1st	H
6.	M	C	20	Down's	57	2nd	M
7.	F	C	23	ASD	80	3rd	M
8.	M	C	22	William's	57	3rd	M
9.	F	C	22	Down's	58	2nd	M
10.	M	H	26	William's	65	4th	M
11.	F	C	22	OHI	48	3rd	L
12.	F	C	25	DD/CP	NR	4th	L

Note. OHI = Other Health Impairment; ID = Intellectual Disability; ASD = Autism Spectrum Disorder;

DD = Developmental Disability; CP = Cerebral Palsy. H = high level; M = medium level; L = low level.

. Students in the high level (H) were capable of working with little support, once training was completed. For example, one student had experience working as a teacher's aide, and even had had experience writing lesson plans when in high school. Students in the middle level (M) either needed more support at work sites, or found jobs too repetitive. For example, one student had worked successfully in the mail room, but found just putting mail in slots to be boring. Students in the low level (L) needed to have significant accommodation or segments of jobs "carved out" in order to be successful. For example, one student loved working with pre-school students, but would need technological aids to assist with reading or writing. Some students had siblings, but none of the siblings were reported to have disabilities.

Parents. All of the parents of the twelve students were from middle to upper middle class backgrounds and had at completed at least a Bachelor's degree. One family was African American, and the rest were Caucasian. Most families had more than one child, though no others with disabilities. Only one family had adopted their child with a disability. There was only one single parent family, a result of a divorce. The student lived with her mother, but did visit her father and siblings.

Staff. The staff participants were divided into two sub groups. The first was the general staff which was comprised of 32 the university's graduate and undergraduate students. These individuals had been hired by the program to conduct classes, work with the students at job sites, and/or oversee the students' residences. It also included two

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additional staff members responsible for academics. The second staff group was

comprised of three administrative staff members: two of the program's staff members

who implement its employment curriculum, and the Comprehensive Transition

Program's (CTP) director.

The general staff members represented diverse racial and ethnic background

which included those from Africa, India, Haiti, and the Philippines. Their undergraduate

degree specialties were varied, though about one half of them have worked with students

with disabilities for two or more years, even if that was not their academic concentration.

Two individuals indicated that they themselves had disabilities. One had dyslexia, and

the other Attention Deficit Hyperactivity Disorder. Four students had completed

different licensures. The following table depicts the general staff demographic data.

Table 3

General Staff Demographics

Demographic information	n	Percentage
Male	9	28
Female	23	7
African American + Other	15	47
Caucasian	17	
Bachelors (Completed)	14	44
Masters (Completed)	3	9

The table below describes the demographics of the administrative staff members, which was comprised of the CTP's director, the employment curriculum administrator, and his assistant.

Table 4

Employment Staff Demographics

Position	Gender	Ethnicity	Degree	Specialty	Yrs with ID Pop.
Director	F	Caucasian	Ph.D.	Special Ed.	15+
Curriculum Admin.	M	Caucasian	M.ED	Special Ed.	6+
Curriculum Assist.	F	Caucasian	HS	Liberal Arts	2+

Design

This mixed method dissertation study focused on an examination of the social validity of a specific educational tool. From a conceptual perspective, social validation is pragmatically based, and addresses if something, whether it is a process, intervention, treatment, or tool, is found to be important, acceptable, and effectively useful for those involve. Klinger and Boardman (2011) indicated that a "pragmatic, paradimic stance emphasizes the purpose of the study, rather than the use of a particular research design" (p. 10). This study followed what those authors call an *embedded design* approach with the qualitative and quantitative data collected sequentially, analyzed separately, and used to enhance the other type of research findings.

Fawcett (1991) and Patton (1999) advise that various methods of triangulation be utilized for both validation and enrichment purposes. This study triangulated both qualitative and quantitative data sets, involving stakeholder perspectives of staff, parents and students to examine consumer dimensions of significance, acceptability, and effectiveness to answer all three of the research questions.

Data Sources

There were three types of data sources used for this study: (a) Likert scale style questionnaires, (b) semi-structured interviews; and (c) observations of students' behaviors while they were individually using the *Your Employment Selections* (YES) tool. The data collected to inform each research question is first briefly summarized with a more detailed description offered later in the chapter.

With the goal of informing research question one, the researcher asked the administrative staff, parents, students, work-site support staff, and employment instructors to rate the importance of the tool for helping students to achieve their goal of identifying and ranking suitable employment options. This was accomplished by using questionnaires and interviews to discover and rate what components the study participants considered important for a successful job match, and whether they thought the tool could provide them with more of those components than they presently had. For example, are there job possibilities they had never thought about, or would the tool provide them with a better sense of the requirements of each type of job in relation to their own suitable for particular positions.

Data collected to inform research question two asked students and members of

the general staff if they found the YES tool to be acceptable in terms of ease of use,

efficiency, cost, and how enjoyable it was to use the tool. This was accomplished by

making observations of the students using the tool to see whether they found it

interesting, and easy it for them to use. The students were also asked to describe and rate

their experience using the YES tool with a questionnaire and interview. To further

explore ease of use of the YES tool, the general staff was asked to rate the ease of

completing the 106-item aptitude protocol for each of the twelve students.

Lastly, data collected to inform the third research question three involved asking

students, parents, administrative staff, work-site support staff, and employment

instructors to describe and rate the effectiveness of the YES tool's results. This was

accomplished by using questionnaires and interviews to elicit the participants'

perceptions related to how well the YES tools provided new information about

potentially suitable job options and how well the student aptitude survey worked to

prioritize more and less suitable options out of the two-to-three choices selected by

students after viewing the videos.

The Your Employment Selections tool. The researcher chose to focus the study

on stakeholder perceptions of the *Your Employment Selections (*YES) tool because this

career educational program is inexpensive, provides videos of 120 jobs where individuals

with intellectual disabilities had been successfully employed, and it has an aptitude

matching component. The YES website can be accessed at www.jobsearch.com and

subscriptions to the tools may be purchased for individuals or groups for different lengths

of time. In the case of this study, the researcher created one job seeker account for each of the 12 participating students.

Accounts are established for each participant on the website on line. Each individual can then access all the categories of job videos, watch them, and make their choices. The facilitator completes the 106-item aptitude protocol for each participant, and stores in on their account. After the individual has narrowed down the choices to no more than three jobs, the software can be run to match the individual's aptitudes with the essential job required skills. A job profile is produced comparing the participant's aptitudes with the skill requirements of the best matched job. A list of strengths and weaknesses is included, with the weaknesses indicating where more training, accommodations, or modifications would be required.

The YES tool was designed for job seekers at or below a second reading level, and/or individuals with significant disabilities, including cognitive limitations involving IQ scores of 40 or below. The website offers two-to-four-minute motion videos of 120 entry level jobs identified as common placements for individuals with disabilities, and those from emerging markets (Morgan, 2008). Each individual participant may access all the categories of job videos, watch them, and make their choices. In the videos, a narrator provides descriptions of the important tasks involved in each job as they are being shown. There is also a *More Info* section which can be read to the individual that provides descriptions on job outlook, training requirements, wages, benefits, and links to related sites.

The job seeker chooses whether the job is preferred or not by clicking the computer mouse on either a *thumb up* or *thumb down* icon on the screen. After viewing as many videos as desired, the individual narrows down the choices to either two or three to further explore.

In addition to self-selection of potential jobs to explore, each individual student in the program is evaluated by someone who is familiar with his/her current skill levels on each of the 106 dimensions, either *good*, *fair*, or *poor*… "according to how well a match exists between the job seeker's current behavior or performance and the dimension." (Morgan, 2008, p. 32). Appendix I is a copy of the 106-item protocol.

Both general and administrative staff members were involved in cooperatively completing the 106-item YES program aptitude protocol (Appendix I) for each student participant. Each staff member had a copy of the protocol, each item was read aloud by the CTP director, and the staff would raise their hands and/or voice to indicate whether they rated, *Good*, *Fair*, or *Poor*, for that item for each student and the researcher recorded the consensus of the group.

For example: "Item 14 is Time Management, managing one's own time productively and the time of others, how would you rate student J, *good*, *fair*, or *poor*?" (Staff response, researcher records) "How about student S?" (Staff response, researcher records) "How about student P?" (Staff response, researcher records). It took several staff meetings to complete the protocols for each of the twelve student participants.

The facilitator entered the results of the 106-item protocol (Appendix I) into each students' on-line account based upon their staff-completed ratings (Appendix I). After

the job-seeker had narrowed down their job choices, the facilitator used the YES program

tools to calculate the aptitude dimensions with the corresponding weighted dimensions

for each job. Immediately after making their final job selections, the students received

their job profiles with an analysis of the suitability of each of the jobs of interest.

The resulting job profile lists the job seeker's strengths and weaknesses for the

best matched job. The profile indicates the proportional scores for each of the jobs (from

0% - 100%), and ranks the student's job selections as jobs one, two, and three based on

the degree of suitability of the matches. "The computer program recognizes strengths as

dimensions weighted 70 or higher in importance [for a particular job] and rated Good,

and weaknesses as dimensions weighted 70 or higher in importance rated Poor" (Morgan,

2008, p. 34). It should be noted that weaknesses are areas for which extra training,

modification, or accommodation would be necessary for the individual to meet with

success in each of the positions.

Development and validation of questionnaires. In terms of the first research

question, the researcher and program staff discussed what type of data could be useful to

describe why students, parents, staff, and others directly responsible for employment

preparation and exploration would want to use the YES tool (or not). The Director and

the Employment Administrators provided their ideas regarding the types of data that

would inform the development of a better understanding of the usefulness of the YES

tools and inform improvements to services provided to students. Other program staff

shared that it would be important for participants to be provided with avenues to indicate

if there were any components important to the job matching process that might be

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missing from the YES tools or elements of the tools that users felt could be improved upon.

Based on these conversations, it was decided that the questionnaire developed for the adult participants in the study should involve rating the importance of students' job related interests, proclivities and aptitudes. Furthermore, the group decided that the questionnaire should contain ratings on what types of information might be needed in any area to improve the effectiveness of the YES tool. For example, it was decided that the instrument should involve an opportunity for study participants to rate the effectiveness of the use of the videos for aiding students as they narrow down job possibilities to explore. In addition, the group decided to involve items that would ask student participants to rate their satisfaction with past and present job placements, as well as rate the use of videos for supporting their own job exploration.

For questionnaires used to answer research question two, it was decided that the YES tool's acceptability from the students' perspectives should be rated on how easy the tool was to use, how interesting, and how informative it was. The general staff questionnaire would rate the acceptability of the collaborative completion of the 106-item aptitude protocol for each of the twelve students based on: (a) how well the collaboration worked, (b) how easy/difficult they were to complete, and (c) preference of others to complete them instead. For the observation data, the researcher rated the degree of the students' satisfaction of the use of the YES tool with behaviors which displayed levels of interest, enjoyment, and ease of use when she watched the taped sessions. Such

behaviors included: attentiveness, smiling, laughing, acting confused, or asking for assistance.

For Question Three questionnaires it was decided that the effectiveness of the YES tool's job profiles' results should be rated on how much information about job possibilities and the students' matching aptitudes and interests contained data that wasn't known before: (a) job opportunities never thought of; (b) job proclivities or settings not known, or realized; and (c) job specific aptitudes never before considered.

The Director and one of the staff administrators validated the questionnaires. Though they may not be considered experts in questionnaire design, they validated that the questions could uncover the data being sought. All questionnaires used for students were previously used and validated during the summer pilot program, by students who did not participate in the study, but were of similar disability demographics. Students were asked if each questionnaire was clear and understandable. No changes were found necessary to make to their contents understandable.

Prior to the formal data collection cycle, all questionnaires used for students were previously used and validated administered during the summer pilot program, by to students who did not participate in the actual study, but were of similar disability demographics to the student participants. Students were asked if each questionnaire was clear and understandable. No changes were found necessary to make to their contents the items more clearly understandable during this instrument pilot phase.

Measures for question one. The following eight measures were used to answer research question one. They are presented in the order in which they were used in the study.

Importance of goal questionnaire for administrative staff and parents. The two administrative staff members who are responsible for employment program, the CTP director, and the parents of the participating students were given a seven-question questionnaire with questions based on a five point Likert scale (Appendix A). Examples of the questions that were asked included rating the importance of using a tool to help identify a student's: (a) job related interests, (b) job related aptitudes, and (c) job possibilities based upon interests and aptitudes.

Importance of goal questionnaire for students. Each of the 12 students were given a three-question questionnaire based on a three point Likert scale (Appendix C). The questions asked the students to rate: (a) how satisfied they were with the job they were in presently, (b) how satisfied they were with the job they had in the past, and (c) how helpful they would find picking out job possibilities from video depictions.

Knowledge of interests/challenges questionnaire for work-site support staff.
Work site support staff completed a three question four point Likert scale and open-ended question questionnaire evaluating their knowledge about the student's job interests, challenges, and need for support (Appendix Y1). This questionnaire was completed before the student they supported used the YES tool and received job profile data results. This date was only collected so the support staff could later refer to it in order to see if

they had learned anything new from the job profile data resulting from the student's use of the YES tool.

Knowledge of interests/challenges questionnaire for employment instructors. Instructors who taught the 1st semester employment class for 1st year students were given a two-question open-ended questionnaire to indicate what they knew about the student participants' job interests and challenges (Appendix Y2). Only these instructors were used since they were the only ones involved in employment preparation. This data was only collected so the instructors could later refer to it and see if they had learned anything new from the job profile data resulting from the student's use of the YES tool.

Interview with employment administrators about importance of goal. The researcher conducted and audio taped semi-structured interviews with the two Employment Administrators and the CTP director to qualify the depth and breadth of how they regarded the importance of using the YES tool. The questions included, but were not limited to: (a) asking them to describe the steps involved in placing a student into job opportunities; (b) describing a student who had experienced a successful job placement, and a student who had experienced challenges with a placement; and (c) describing what kind, if any, of additional information about students' interest and aptitude would be helpful. They were also to record three job possibilities for each participating student, so it would become apparent if the use of the YES program tool could produce options that hadn't already been considered.

Interview with students about goal. The researcher conducted and audio taped interviews with students to ascertain the depth and breadth of how they regarded the

importance of using the YES tool to assist them in their job matching pursuits (Appendix C). These included questions regarding: (a) how they have made decisions about what jobs they might want to have, (b) whether using another tool where they could see videos of job possibilities might be helpful, and (c) what more they would like to learn about themselves, or job options, to make decisions.

Interview with parents about importance of goal. The researcher conducted and audio taped interviews, over the phone or using Skype, with at least one of the parents of the twelve student participants in order to qualify the depth and breadth of how they regarded the importance of using the YES tool for their children's job matching pursuits (Appendix Z). The questions included, but were not limited to: (a) describing their child's job exploration process; (b) describing their child's successful and/or challenging placements, if any; and (c) describing any kind of additional information about their child's interests or aptitudes which would be helpful. They were also asked to pick two or three job possibilities that they thought would be good for their child.

Parents' short answers. Seven of the parents also agreed to fill in the 106 item O*NET based aptitude protocol (Appendix I). These parents described to the researcher the time and effort that it took them to complete the protocol.

Measures for question two. The following four measures were used to answer research question two. They are presented in the order in which they were used in the study.

Acceptability of procedure questionnaire for staff on aptitude protocol. The general staff collaboratively completed the 106 item O*NET based YES aptitude protocol for each of the 12 student participants (Appendix I) at several staff meeting times. At a subsequent staff meeting, they were asked to complete a questionnaire evaluating the acceptability of the process of completing the protocol (Appendix S). The three five-point Likert scale and one open-ended question questionnaire included questions regarding how successful they found collaboration on protocol had been, and to what extent, if any, they thought the time and effort completing the protocol detracted from using the YES tool.

Acceptability of procedure questionnaire for student participants. The students were given a five-question scaled and open ended questionnaire based on a three point Likert scale (Appendix E) after they used the YES program tool. They had had an opportunity to make choices about jobs they might be interested in by picking them out of categories and pairs while watching videos and listening to further information about the job options. Questions included how easy, interesting, and helpful they perceived the YES tool to be. This was a paper and pencil exercise, and the students were assisted in its completion appropriately.

Acceptability of procedure questionnaire for researcher/facilitator. The researcher completed a five-question scaled and open ended questionnaire based on a five point Likert scale (Appendix D) regarding each student's session when she reviewed each session on videotape. Questions included evaluating the ease of administering the YES tool for that student, as well as the researcher's perceptions regarding the tools

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appropriateness for the student. The researcher had acted as the facilitator by assisting

student participants with the YES program tool. Each student had had the opportunity to

select job preferences after watching the videos s/he chose from options that were

categorized into job types. The researcher had been available to assist, as needed, while

the student narrowed their choices down to no more than three job preferences. Since

each questionnaire was completed while the researcher was viewing each taped session, it

took the length of each session to complete.

Observations. The sessions of each student using the YES job search tool,

assisted by the researcher who acted as facilitator, were videotaped so that ease of use,

ease of administration, and enjoyment of use could be documented. The researcher used

Appendix O when she reviewed all sessions via videotape to quantify these aspects of the

acceptability of the use and administration of the YES job search tool.

Measures for question three. The following five measures were used to answer

research question three. They are presented in the order in which they were used in the

study.

Effectiveness of results questionnaire for students. After each student received

the job selection profile with the corresponding aptitude strengths/weaknesses, the

researcher took the time to go over and explain the results. The student then completed a

three question, three point Likert scale questionnaire quantifying the effectiveness of their

results from the YES tool (Appendix H). Questions concerned how much supplemental

information the student learned about job opportunities, whether they garnered additional

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insights into themselves, and how much more the student felt prepared to look for job opportunities, after using the YES tool.

Effectiveness of results questionnaire for administrators. The researcher and the employment curriculum administrators collaboratively designed a five point Likert scale checklist/questionnaire which was used to quantify the effectiveness of the job profile data results for each student (Appendix F). It was not piloted or changed. This questionnaire was completed by the two Employment Administrators and the CTP director for each of the twelve students after they received all twelve students' job profiles which the YES tool produced. Effectiveness of the tool quantified whether the job profile data produced new information regarding the student's job interests, related strengths/weaknesses, new job interests/possibilities, and job related proclivities.

Effectiveness questionnaire for work-site staff, instructors and parents. The work-site support staff and the employment class instructors were given a three-question questionnaire, including five point Likert scale questions, to complete after they viewed their students YES job profile data results (Appendix Y3). The questions asked them to indicate what new information they learned about their students' job interests and aptitudes, and to quantify the usefulness of that data.

Interviews with students about effectiveness of results. The researcher conducted and audio taped interviews with the students to ascertain the depth and breadth of how they regarded the effective ness of the job profile results produced by the YES tool (Appendix H). The questions included: (a) was anything new learned about job interests, (b) was anything new learned about job possibilities, (c) explain what was

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exciting and/or disappointing about what was learned, and (d) describe what next steps

should be taken with the information that was learned.

Interview with parents/employment administrators about effectiveness of

results. The researcher conducted and audio taped interviews with parents, employment

curriculum administrators, including the CTP director, to ascertain the depth and breadth

of how they regarded the effectiveness of the job profile results produced by the YES tool

(Appendix G). These included questions regarding: (a) discussion of anything new

learned about students'/child's job interests, proclivities, strengths/weaknesses; (b) new

job options that might have been chosen; and (c) recommendations for future use in the

CTP program. Employment administrators were asked to take into consideration the

results of all twelve of the student participants, while parents, of course, only considered

their own child's results. The interviews with the Employment administrators took about

45 minutes to conduct.

Procedures

Study approval. An application was submitted to the Human Subject Review

Board at the researcher's university which was accepted and approved. Changes to

parental consent forms that were already approved were submitted at a later date to the

Board for amendment approval prior to data collection. The one change was the addition

of a section which informed them that they had an opportunity to complete the 106-item

aptitude protocol for their child if they chose to volunteer to do so.

Informed consent. Parents, students, administrative and general staff completed

consent forms indicating that they agreed to voluntarily participate in the study.

Parents and students. The researcher gave a brief presentation about the upcoming study to the parents and students who were present at the CTP's orientation information session held before the semester began. Students and parents then had the opportunity to complete and return the forms to the researcher before they left. Students were given an approved assent form (Appendix K) which described what they would be expected to do, possible benefits, and risks, if they chose to participate in the study. The forms indicated that participation was completely voluntary, and they also could refuse to be audiotaped. The parents were given two forms. One was an assent form agreeing to allow their child to participate in the study (Appendix J). Participants in the program were not minors, but due to their intellectual and developmental disabilities, parental assent was needed to be obtained from their parents or guardians. The other consent form (Appendix W Amended) had two parts. The first part was for the parents to consent to participate themselves in the study by completing questionnaires and participating in semi-structured interviews.   They were informed that participation was completely voluntary, and that they could refuse to be audiotaped. A   In the second part parents could agree to fill in the 106 item O*NET based aptitude protocol, return it to the researcher, and indicate to the researcher how long it took them to complete.

Employment administrators. Those staff members who are responsible for the employment portion of the program's curriculum and the CTP's director were given two copies of a consent form to sign (Appendix L). Staff gave one signed copy of the form to the researcher and kept one for their own records. The participants were informed that

participation in this study is completely voluntary. There was a place for them to indicate

if they do not want to be audiotaped, but were still willing to participate.

General Staff. General staff members, including those who are responsible for

teaching the program's students, were given a consent form (Appendix M). Staff gave

one signed copy of the form to the researcher and kept one for their own records. The

participants were informed that participation in this study was completely voluntary.

Observer introduction. The researcher and the observer discussed the

Observation Training Checklist (Appendix Z3) which indicated what actions, reactions,

gestures, expressions would specify acceptability indicators which were to be recorded.

For example, if the observer noticed that the student was focused, and interacting with the

tool, that indicated that the "student was engaged" and he was to mark that in the box

entitled "student is engaged" on the Observation Checklist (Appendix O).

Data Collection.

Completion and input of aptitude protocols. Both general and administrative

staff members were included in cooperatively completing the 106-item aptitude protocol

(Appendix I) which is part of the YES tool for each student participant. Each staff

member had a copy of the protocol, each item was read aloud by the CTP director, and

the staff would raise their hands and/or voice to indicate whether they rated, Good, Fair,

or Poor, for that item for each student. For example: "Item 14 is Time Management,

managing one's own time productively and the time of others, how would you rate

student J, 'good,' 'fair,' or 'poor'?" (Staff response, researcher records) "How about

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student S?" (Staff response, researcher records) "How about student P?" (Staff response, researcher records). It took several more meetings to complete all twelve protocols.

The researcher created one job seeker account for each of the 12 participating students. She input the results of the 106 item protocol (Appendix I) on each online account for each student based upon their staff-completed ratings (Appendix I). With that information already input, the students could receive their job profiles with the individualized corresponding strengths/weaknesses immediately after having made their final selections.

Importance of goal interviews & questionnaires. The employment administrator staff, student participants and their parents were asked to complete questionnaires about how important they perceived the goal of the YES tool could be for this program. The same participants were then interviewed about the same topic.

Employment administrative staff. The researcher first met with the two employment administrators responsible for the employment curriculum. They were given a seven-question questionnaire with questions based on a five point Likert scale (Appendix A). Examples of the questions that were asked included rating the importance of using a tool to help identify a student's: (a) job related interests, (b) job related aptitudes, and (c) job possibilities based upon interests and aptitudes. The questionnaire took about five minutes to complete.

When the questionnaires were completed, the researcher then conducted the semi-structured interview which she audio-taped (Appendix B). The questions included, but were not limited to: (a) the employment administrators to describe the steps involved in

placing a student into job opportunities; (b) describing a student who had experienced a successful job placement, and a student who had experienced challenges with a placement; and (c) describing what kind, if any, of additional information about students' interest and aptitude would be helpful to inform high quality job placements.

The employment administrators were also asked to record three job possibilities for each participating student, for pre and post comparison purposes, so it would become apparent if the use of the YES program tool could produce options that had not already been considered prior to using the tool.

The interview took about 30 minutes to complete. When the interview was complete, the two staff members collaborated with the researcher to design a checklist measure which would be used to quantify the effectiveness of each student's job profile produced by the YES program tool. The result of this collaboration is found in the Administrative Employment Staff Questionnaire on Tool's Effectiveness (Appendix F).

Following this meeting, the researcher then met with the CTP director so she could complete the same questionnaire (Appendix A) and the interview (Appendix B). The interview with the CTP director was also audio-taped.

Student participants. The researcher met with all twelve of the student participants individually. The students were given a three-question questionnaire with questions based on a three point Likert scale (Appendix C). Questions were about how the students felt about their past and present jobs, and whether they felt watching videos about job possibilities would be helpful to their job exploration process. The questionnaire took the students about five minutes to complete.

When the questionnaire was completed, the researcher conducted and audio taped interviews with students to ascertain the depth and breadth of how they regarded the importance of using the YES tool to assist them in their job matching pursuits (Appendix C). These interviews included the following questions: (a) regarding how they have made decisions about what jobs they might want to have, (b) whether using another tool where they could see videos of job possibilities might be helpful, (c) and what more they would like to learn about themselves, or job options, to make decisions.

The interview took about 10 minutes to conduct. Some students went on to use the YES program on the computer immediately following completion of the questionnaire and interview, if there was ample time, while others met with the researcher for a follow-up session.

Parent participants. All parents were contacted by email to arrange a time when they could complete the questionnaires and be interviewed by the researcher over the phone or via Skype (see Appendix Z1). Though ideally the researcher had hoped to have two separate sessions with the parents, (one *before* their child used the YES program regarding how they viewed the importance of using a video job matching program, and one *after* regarding the effectiveness of the YES program based on their child's job profiles), the logistics required that those be condensed into just one session. These sessions were scheduled, therefore, after all the students had used the YES program, and received their job profiles. The email had an attachment of the child's job profile results, and requested that the parents jot down two or three job possibilities they thought were

good for their child before looking at the attached job profile, and scheduling a telephone session.

During, the first portion of the audio-taped session with the parent, the researcher asked the parent to complete the importance questionnaire orally, while the researcher copied their responses on the seven-question questionnaire with questions based on a five point Likert scale (Appendix A). Examples of the questions that were asked included rating the importance of using a tool to help identify a student's: (a) job related interests, (b) job related aptitudes, and (c) job possibilities based upon their child's interests and aptitudes. The parent questionnaire took no more than five minutes to complete.

Following the completion of the questionnaire, in the same session, the researcher proceeded to conduct a two-part semi-structured interview in order to qualify the depth and breadth of how they regarded the importance of using the YES tool for their children's job matching pursuits (Appendix Z). In the first part of the interview session the questions included, but were not limited to: (a) describing their child's job exploration process; (b) describing their child's successful and/or challenging placements, if any; and (c) describing any kind of additional information about their child's interests or aptitudes that would be helpful to inform a suitable job placement. The second half of the audio-taped session involved eliciting each parent's perceptions of the effects produced by their child's use of the YES tool, (the job profile), and will be discussed shortly. Each parent interview took no longer than 30 minutes to complete.

Knowledge of aptitude, challenges, and job interest questionnaires. The staff that accompanied students to their work-sites and the first year, first semester

employment instructors were given questionnaires which asked them to rate their

students' aptitudes, challenges, and work interests. This data was collected so that the

staff members could have something to refer back to in order to see if the use of the YES

tool provided any additional information on their students.

Work-site support staff. The researcher met with the work-site support staff and

completed a three question four point Likert scale and open-ended question questionnaire

evaluating their knowledge about the student's job interests, challenges, and need for

support (Appendix Y1). The questionnaire took no longer than five minutes to complete.

This questionnaire was completed before the staff received the YES job profile data

results from student they supported, and its purpose was just so these staff members

would have a reference point so they could more accurately judge whether any new

information was garnered when the students used the YES tool.

Employment class instructors. The researcher met with the instructors who taught

the first year/first semester students the employment preparation class, so that they could

complete a two question, yes/no and open-ended questionnaire (Appendix Y2). The

instructors indicated: (a) what, if any, job interests an individual student had, that they

were aware of, and (b) what, if any challenges, they were aware of that should be

considered when considering job matches for that student. The questionnaire took no

longer than five minutes to complete. This questionnaire was completed before the staff

received the YES job profile data results from student they instructed, and its purpose

was just so these staff members would have a reference point so they could more

accurately judge whether any new information was garnered when the students used the YES tool.

Acceptability of YES procedure questionnaires and observations. Students were given questionnaires regarding how interesting, informative, and easy they found it was to use the YES tool. Observation data was also collected on those particular while they were using the tool. General staff members completed a questionnaire regarding how efficient and easy it was to complete the 106 item aptitude protocols for each of the twelve students. The seven parents who volunteered to complete the same protocol for their child were asked to let the researcher know how long the completion took them, and whether they ran into any difficulties.

Student acceptability questionnaire. The researcher administered the acceptability questionnaire to each student after the student had finished using the YES job search tool (Appendix E). The questionnaire had two questions based on a three point Likert scale regarding how easy the program was to take, and whether they found it interesting to take. There were also three open ended questions asking the student to specifically describe what they found most interesting, most difficult, and whether they thought this was a good way to learn about jobs. The questionnaires took less than five minutes to complete.

General staff acceptability questionnaire. At a staff meeting following the completion of all twelve students 106 item aptitude protocol, the staff was given an acceptability questionnaire (Appendix S) regarding their perception of the time and effort

it took to complete the 106 item O*NET based aptitude protocol for each student

(Appendix I). The questionnaire took no more than five minutes to complete.

   Observations. An observer was present at seven out of the twelve sessions that

the students used the YES tool, and for observation reliability purposes, used the

Observation Checklist (Appendix 0) to record the acceptability/enjoyability qualifiers

that were listed. When all students had completed using the YES job search tool, the

researcher reviewed the video-taped recordings of each session. She used the same

observation check list to record indicators of ease of use and interest (Appendix O). She

marked the box in each section that was observed, for each category that was observed,

only once. She then tallied the marks for each category. Since one of the sessions was

not able to be videotaped due to mechanical difficulties, even though she had the

observer's checklist for that session, the researcher did not use any tallies for that student

in her final calculations. When she had completed her own observations, the researcher

compared her findings with the observer's findings of the sessions he had also observed

for inter-observer reliability.

   Parents' short answers. Seven of the parents also agreed to fill in the 106 item

O*NET based aptitude protocol (Appendix I) described to the researcher the time and

effort that it took them to complete the protocol.

   Effectiveness of data questionnaires and interviews. Student participants, their

parents, the employment administrator staff were asked to complete questionnaires

regarding how they perceived the effectiveness, or utility, of the job profiles that were

produced by the use of the YES tool. Students, their parents and the employment administrator staff were then interviewed so they could elaborate on these perceptions.

Student questionnaire. After each student had completed using the YES job search tool, they received and reviewed the job profile profiles with corresponding aptitude evaluations with the researcher. The researcher then administered a three question three point Likert scale Student Effectiveness Questionnaire. The students rated how much additional information they had learned about job opportunities, about themselves, and how prepared they now felt about looking for a job opportunity. The questionnaire took no more than five minutes to complete.

Parent questionnaire. During the second part of the audio-taped session with the parent(s), they were asked to look at the attached job profiles that the YES tool had produced during their child's session. The researcher read them the questions on the Parent/Staff Effectiveness Questionnaire about the efficacy of the data produced by the YES job search tool, (their child's job profiles), and she filled in their responses (Appendix Y3). The questions regarded whether they learned anything new about their child's job interests, proclivities, job-related strengths/weaknesses, and job possibilities. They were asked to rate the effectiveness of their child's use of the YES job search tool on a five point Likert scale. The questionnaire took no more than five minutes to complete.

Work-site support and employment instructor questionnaire. When the students had completed using the YES job search tool, the researcher provided the students' job profile results to the work-site support staff and the first-year employment instructors to

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examine and compare with the Support Staff Goal and Instructor Goal Questionnaires

they had completed before their students had used the YES job search tool (Appendix Y1

for support staff, Appendix Y2 for instructors) to see if they had learned anything new.

The researcher then had them complete a five point Likert scale Parent/Staff

Questionnaire to evaluate the usefulness of what they learned about the student's job

interests and job related aptitudes (Appendix Y3). The questionnaire took no more than

five minutes to complete.

 Employment administrative staff questionnaire. The researcher met with the two

Employment Curriculum staff members together, and with the CTP director separately.

They completed the Effectiveness Checklist for each of the twelve participating students

first (Appendix F). This had them quantify whether they learned anything new about the

student's job interests, job-related proclivities, job possibilities, and job-related

strengths/weaknesses. They then rated the usefulness garnered for that student from the

YES job matching search on a five point Likert scale. The Checklist for all twelve took

them less than an hour to complete.

 Student interview. After each student had reviewed their job profiles, they were

asked to elaborate on new discoveries, any disappointments, and what the next steps they

would take with the information they garnered from taking the YES job search tool. The

interview took no more than ten minutes to conduct.

 Parent interview. During the second part of the audio-taped session with the

parent(s), The researcher also conducted a short semi-structured interview (Appendix G).

The parents were asked to discuss and describe anything new that they had learned about

their child due to the use of this tool, and whether there were any new job options that their child had preferred which they had never considered before. Lastly, the parent was asked if they would recommend that the CTP program use the YES job search tool in the future, and to qualify those recommendations. The interview took about 20 minutes to conduct.

Employment staff administrators interview. After the CTP director, and the two employment curriculum administrators had completed the Effectiveness Checklist (Appendix F) for each student, the researcher then conducted an audio-taped semi-structured interview (Appendix G). The staff members were asked to qualify what they learned about the students, what job choices they had never considered for students, and then explain whether, and how, the use of the YES job search tool might be used for this CTP program in the future. The interview took about 45 minutes to conduct.

Fidelity of Treatment, Reliability, and Trustworthiness

Fidelity of treatment measure for aptitude protocol completion. The researcher used a checklist to make ensure that all 106 items of the aptitude protocol had been completed and input into each student's confidential job seeking account. Appendix Q presents this fidelity of treatment measure used to ensure that the YES Aptitude Protocol was completed as thoroughly as possible. The researcher completed this measure for each of the twelve students. Each measure had two steps that were planned, and each measure had two steps that were completed. (24 steps completed/ 24 steps planned) x 100% = 100%. There was 100% fidelity of aptitude protocol completion.

Fidelity of treatment measure for YES program intervention. A checklist (Appendix R) was used to ensure the fidelity of treatment measure that the researcher used to ensure that the YES program tool was used the way it was intended to be use. This checklist guided the researcher-as-facilitator's instruction and assistance provided to the student as they used the YES tool, tracked student progress to ensure that students completed making the job choices, that each of the student's protocol was input into each student's account, and that a job profile was produced.

As mentioned above, the intention was to videotape each students' YES tool session using the YES tool. In actuality, eleven out of the twelve sessions were videotaped, since the machine malfunctioned during one of the sessions.

The researcher used the Fidelity Treatment Measure for YES Program Intervention form (Appendix R) while reviewing and analyzing all of the videotape sessions via videotape. The researcher completed the measure for each of the eleven students that were videotaped. Each measure had six steps planned, and each measure had six steps completed. (66 steps completed/66 steps planned) x 100% = 100%. There was 100% fidelity of treatment for the YES program intervention for the eleven students that were videotaped (Gable, Hendrickson, & VanAcker, 2001).

Reliability. The study involved an observer assistant, a male college graduate, who assisted in taking observation notes for seven out of the twelve sessions (58%) of the student participants using the YES program tool. This assistance allowed the researcher to act as facilitator, available to explain and assist the students in using the YES tool. The researcher used the same data collection form to analyze the videotaped observations

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as the form used by the observer assistance. The observer assistant's observation

notations were then compared with the researcher's notations made as she reviewed the

videotaped YES job search sessions.

Six sessions, were analyzed using the Kappa coefficient to ascertain the inter-

observer agreement for the sake of observation reliability. The Kappa coefficient for

agreement was .899. Using the inter-observer agreement formula: Number of

Agreements/(Number of Agreements + Disagreements) x 100=   58/60 x 100 =   96.6 %

Since .966 is greater than .70, the inter-observer agreement was acceptable (Stemler,

2004).

Trustworthiness established through credibility. The criterion of credibility

addresses the need to ensure that a study measures what is actually intended (Shenton,

2004).   Shenton (2004) refers to four criteria that can be employed when utilizing

qualitative methods in order to establish the trustworthiness of a research study: (a)

credibility, (b) transferability, (c) dependability, and (d) confirmability. Within each

criterion, there are provisions that researchers may make in order to meet those criteria,

and thereby establish confidence in their findings. The criterion of credibility addresses

the need to ensure that a study measures what is actually intended (Shenton, 2004). The

following provisions were made by the researcher to meet the criterion of credibility.

Adoption of appropriate research methods. Carter, (2010), indicated that

interviews, (in particular semi-structured interviews), Likert-type rated scale

questionnaires, and direct observations are among the best tools to use in order to

measure the social validity of a tool or intervention. All three of these measures were employed in this study.

Development of early familiarity with the culture. Familiarity with the culture of the organization or the institution provides the researcher with an adequate understanding, and establishes a relationship of trust with the participants (Shenton, 2004). To meet these criteria, the researcher spent a semester doing an internship with the study's CTP program in an effort to create a foundation of trust and mutual understanding.

Random sampling. Random sampling helps counteract the possibility of a biased selection of participants, and increases the likelihood that research participants are representatives of the larger group (Shenton, 2004). Though the student participants were not randomly sampled in a pure sense, since the names were selected from among those who attended the orientation presentation and filled out the consent to participate forms, the researcher did her best to approximate this procedure. She separated the consent forms by their year in school into four piles and drew three names for each year until each group of three student forms had at least one male participant in the set.

Triangulation. Triangulation of methods and sources are among methods used to enhance the credibility of the data, for both validation and enrichment purposes (Shenton, 2004). This study utilized different qualitative and quantitative measures as sources, and drew upon the perspective of parents, students and staff as data sources.

Frequent debriefing sessions. Discussions with superiors such as dissertation committee members can broaden a researcher's perspective and might help him or her to

recognize biases, assumptions or flaws (Shenton, 2004). To take advantage of the

affordances provided by more experienced researchers, throughout the study, the

researcher met with her superior to discuss the study and make appropriate adjustments.

      Thick description of the phenomenon under scrutiny. Detailed descriptions

help convey actual situations and their contexts which can promote credibility (Shenton,

2004). Collecting and sharing excerpts of interviews from students, parents, and

employment administrators, contribute to this type of rich, thick description of how users

experience the YES job search tool.

      Member checks. Member checks are considered to be a vital provision that can

significantly enhance credibility of a study (Guba, 1981; Shenton, 2004). The researcher

checked with participants during the course of the study, and at the end of interview

collections to verify that the data accurately represented their perceptions.

      Examination of previous research findings. This provision helps to evaluate

whether the results of a study are compatible with past studies (Shenton, 2004). The

researcher examined related past studies, especially those done studying this particular

tool.

      Trustworthiness established through transferability. When evaluating a social

validity study, in particular, it is most important to ensure that there is content relevance

and representativeness (Carter, 2010). In this case, the study design involved asking

parents, employment administrators, and students to engage in an iterative process where

they defined, projected, and redefined the importance of the tool's goals behind the YES

tool, appropriateness of use, and effectiveness of results. Shenton, (2004), indicated that

it is part of the researcher's responsibility to relay enough contextual information so that readers can make such a transfer. Specifically, in the case of this study, the researcher decided that it was best to confirm that the data collected represented the goals, procedures, and effects of the tool use with the various stakeholder groups with the study and that the most important information was shared with the appropriate target audience (Carter, 2010). This procedure helped enhance the study's content relevance within the confines of its limitations.

   Trustworthiness established through confirmability. Shenton (2004) emphasized that steps must be taken to ensure that research findings are, "the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher" (p. 10). He underscored the role of triangulation in promoting such confirmability to reduce the effect of investigator bias (Shenton, 2004). In this study, the researcher used triangulation of sources and methods, as described above.

Data Analysis

   Qualitative data analysis. Interviews were transcribed from the audio tapes and typed into interview documents for each respondent, with ample space in margins for note taking during analysis. The transcriptions were rechecked with the audio recording to ensure that the account was accurate (Creswell, 2008).

   The researcher read each respondent's interview and coded emerging categories with initial codes using a data table to record the emergent codes. "The object of the coding process is to make sense out of text data, divide it into text or image segments, label the segments with codes, examine codes for overlap and redundancy, and collapse

these codes into broad themes" (Creswell, 2008, p. 251). Through an iterative process of reading other respondents' interview transcripts and returning to the original codes, additional codes emerged and themes became apparent until the analysis reached a saturation point, and no further themes were detected in the datasets. The researcher then reduced the initial codes into a distilled set of final codes, each with distinct themes.

Except for the transcription, the same coding process was utilized for the written answers participants provided to open ended questions found on the questionnaires. Resulting codes were added to the code data table.

Because semi-structured interviews were used, distinct themes were easier to delineate (Carter, 2010), and the researcher then focused on discovering and recording sub themes into the data table. Finally, the researcher recorded the frequency with which each respondent expressed a theme and/or sub-theme, and recorded these observations in the table. Only themes which were expressed by more than one respondent were listed separately, though sub-themes with only one respondent were maintained for enrichment purposes.

In appreciation of the advice provided by Creswell (2008) an expert in qualitative research was asked to independently evaluate the appropriateness of coding process. This expert examined 25% of the transcriptions and the interrater coding results were 100%.

Quantitative data analysis. Descriptive statistics measuring central tendency was used to quantify the data from questionnaires. Descriptive statistics measuring frequencies was used to quantify the observation data on students using the YES tool.

Likert scale questionnaires. Descriptive statistics measuring central tendency were used to analyze the data from these questionnaires. Sullivan and Artino, (2013), reiterate that the distance between responses on ordinal scales are not necessarily equidistant as are ones on interval scales. Descriptive statistics using means, therefore, can have unclear meanings. (For example, how much more than *none* is a *little*?) Additionally, if responses are clustered at extremes, rather than having a *normal* bell curve distribution, the mean may appear to be the central response, when in fact this is a mischaracterization of patterns found within the data. For this reason, the researcher chose to analyze and portray the central tendency of the questionnaire data using median, interquartile range, minimum and maximum, mean and standard deviation rather than solely the means and standard deviations.

Observations. Descriptive statistics measuring frequencies were used to analyze the recorded observational data from the *acceptability* behaviors students demonstrated when using the YES job search tool during eleven out of the twelve sessions. Recall that the video recorder malfunctioned during one student's session, thus only eleven videos were made. There were six indicators regarding how easy or difficult the student found using the YES tool to be, and four indicators regarding how enjoyable the tool was to use.

Data comparison. After the qualitative data was reduced into themes and sub themes, it was recorded and displayed quantitatively in data tables. The quantitative and qualitative data were then compared for the purposes of both triangulation and enhancement of understanding of the complex nuances found in the data (Johnson & Onwuegbuzie, 2004).

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The following table illustrates the data sources, procedures, and analyses used to answer each of the three research questions.

Table 5

Research Questions' Illustration

Research Question	Data Sources	Procedures	1st Analysis	2nd Analysis
One: Importance of Goal	Student Questionnaire	Pen/paper	Quantitative	
	Parent Questionnaire	Over phone	Quantitative	
	Admin. Questionnaire	Pen/paper	Quantitative	Quantitative>
	Support Questionnaire	Pen/paper	Quantitative	/
	Instruct. Questionnaire	Pen/paper	Quantitative	/
	Student Interview	Live/taped	Qualitative	/
	Parent Interview	Phone/taped	Qualitative	
	Admin. Interviews	Live/taped	Qualitative	<Qualitative
Two: Acceptability of Procedure	Observations of Students use of tool	Videotaped	Quantitative	
			Quantitative	
	Student Questionnaire	Pen/paper	Quantitative	
	Staff Questionnaire	Pen/paper		
Three: Effectiveness of Results	Student Questionnaire	Pen/paper	Quantitative	
	Parent Questionnaire	Over phone	Quantitative	
	Support Questionnaire	Pen/paper	Quantitative	Quantitative>
	Instruct. Questionnaire	Pen/paper	Quantitative	/
	Admin. Questionnaire	Pen/paper	Quantitative	/
	Student Interview	Live/taped	Qualitative	/
	Parent Interview	Phone/taped	Qualitative	
	Admin. Interview	Live/taped	Qualitative	<Qualitative

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Chapter Four

This chapter presents the results of the mixed method design dissertation study

that examined the social validity of the *Your Employment Selections* (YES) program tool

at a four-year post-secondary program for students with intellectual or developmental

disabilities. The study combined qualitative data based on interviews with students, staff

and parents with quantitative data based on observations and questionnaires, to determine

how the participants perceived the utility of the YES program tool for enhancing

employment preparation services provided through a Comprehensive Transition

Program's (CPT) university-based program.

The results of this study are presented in response to three research questions.

The study focused on: (a) the social significance of the goals of the YES job search

program, (b) the social appropriateness of the procedures, and (c) the social importance

of the effects or outcomes of the use of the YES job search tool.

Question One

Following is a presentation of results that inform the first research question.

Recall that the first research question was: To what extent do the staff, students, and their

parents, find the goal of the YES program tool important as a possible addition to this

post-secondary program? With this question, the researcher examined whether the use of

the YES job search tool could enhance the previous job-related information gathered

from the ecological assessments for job exploration and training. Would exploring job possibilities by watching them being performed on videos be additionally helpful? Would discovering what individual strengths and weaknesses coordinate with chosen jobs be more informative?

In the research setting, the main objective of this CTP's job opportunity program is to prepare students experientially for meaningful employment following graduation. Rather than waiting to place students in post-graduation employment positions, students are placed in seven different job assignments based upon their interests, aptitudes, and the availability of openings on campus (for second semester freshmen, sophomores, and juniors), and/or possibly off campus (for some juniors and seniors). First semester freshmen are enrolled in a classroom-based job preparation class where they work on learning about and developing job related skills and skill sets (i.e. resume building and role playing) in preparation for their first on-campus job placement second semester.

Before each job placement, the CTP Director holds Person-Centered Planning (PCP) meetings with each student and their family member(s) in which they discuss their thoughts, likes, and dislikes about past jobs, and then explore possible job opportunities. The resulting notes from the PCP meetings are forwarded to the CTP Employment Administrators, who then meet with the students to finalize job placement choices. Usually arrangements can be made so that the student can be placed within one of their top three choices out of the 22 plus possibilities available on campus (or off campus when appropriate).

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Situational assessments are made in coordination with the students' job support staff member and the job supervisor. The students record the skills learned and what they liked or disliked about each job in a work journal to inform future job choices.

Per the CTP Director, at this juncture, any job related formal interest or aptitude assessments and final job placement, are left to the Department of Rehabilitation Services after the student graduates. The CTP Director believes it would be preferable that such tasks be accomplished before graduation, which is why she was interested in examining this tool.

YES tool goals: Qualitative findings that inform question one. Following is a presentation of the six broad themes related to how the goal of the YES tool might or might not be valued as an addition to the CTP program. These six themes were identified through an analysis the interviews conducted with the Director, Employment Administrators, parents, and students. Some of the sub-elements of these themes were also triangulated with the results of the Likert scale questionnaires that the Director, Employment Administrators, and parents completed. The results of this triangulation will be discussed in the next section. The table below depicts the participants' frequency of responses categorized by theme and sub-theme elements regarding the potential value of the YES job search tool as an addition to the existing CTP program.

Table 6

Question 1: Interview Themes 1.0 - 6.0

1.0 Elements for Successful Job Match	Dir.	EmployAdmins	Parent	Student	Total
1.1 Interest, Source of pride, Source of friends, right environment	1	0	3	8	12
1.2 Use Strengths	1	1	4	7	13
1.3 Limitations do not interfere with essential skills	0	1	4	1	6
1.4 Have been tried out and then trained for (incl. mods/accom)	0	0	1	0	1
Totals	**2**	**2**	**12**	**16**	**31**

2.0 Elements of Challenging Matches	Dir.	EmployAdmins	Parent	Student	Total
2.1 Boring, wrong environment	0	0	2	2	4
2.2 Does not use strengths	0	0	2	2	4
2.3 Limitations interfere with essential skills; no mods.	0	2	2	1	5
2.4 Are not realistically viable with competitive (or any) pay	0	0	3	0	3
2.5 Had no hands on experience	1	0	0	0	1
2.6 Are unaware of job prep skills or steps	1	0	0	0	1
Totals	**2**	**2**	**9**	**5**	**18**

3.0 Wide Range of Pre-CTP Job Preparation	Dir.	EmployAdmin	Parent	Student	Total
3.1 Job experiences only based convenience	0	0	4	0	4
3.2 Assessments (including DRS run) inadequate	0	0	6	0	6
3.3 Limited or no job experiences (through school, or community)	1	0	1	1	3
3.4 Job experiences informed by interests and strengths	1	0	6	2	9
3.5 Adequate job practice w skills, mods, accoms	1	0	1	1	2
3.6 Job experiences based on interest/aptitude assessments	0	0	1	0	1
Totals	**3**	**0**	**18**	**4**	**25**

4.0 Steps of CTP Job Preparation	Dir.	EmployAdmin	Parent	Student	Total
4.1 Classroom based skill practice	1	0	0	0	1
4.2 PCP meetings>3 choices out of options sometimes messy	1	2	1	2	6
4.3 Situational assessments & student work journal reflections	1	1	0	0	2
4.4 Based on conversations and trial & error	1	1	0	0	2
4.5 Students get 7 different job practicums before graduation	0	1	0	0	1
4.6 Formal assessment & employment left to DRS after grad.	1	0	0	0	1
Totals	**5**	**5**	**1**	**2**	**13**

5.0 Elements to expand CTP's Job Preparation Program	Dir.	EmployAdmin	Parent	Student	Total
5.1 Assess/validate interests, strengths, modification needs more	1	0	0	0	1
5.2 Expand realistic job options choices matching w/ interest/strength	1	1	4	0	6
5.3 Expand knowledge of job skill prep steps & mod/accom needs	1	0	3	0	4
5.4 Include on-site mod/accom guides & for job practicums	0	1	1	0	2
5.5 Choices using interest/aptitude assess could clarify possibilities	1	2	2	1	6
5.6 Less left up to DRS after grad. by expanding beyond practicum	1	0	2	0	3
5.7 Close the gaps between varied pre-CTP exposure, & assessments	1	0	0	0	1
Totals	**6**	**4**	**12**	**0**	**23**

6.0 Unsure tool could possibly be useful	Dir.	EmployAdmin	Parent	Student	Total
6.1 Already have enough knowledge	0	0	1	1	2
6.2 Past assessments were useless	0	0	1	0	1
6.3 Just not sure	0	0	0	2	2
Totals	**0**	**0**	**2**	**3**	**5**

Theme 1.0: Elements for successful job match. Theme 1.0 describes components that participants perceived contributed to successful job matches. According to the participant interview responses, the most important components were:

(1.1) job interests (including the job being a source of pride and friends),

(1.2) being able to utilize strengths, and

(1.3) limitations either not interfering with essential on-the-job skills, or adequate modifications or accommodations put in place to support students to successfully overcome limitations in particular areas.

For example, *Student Nine* described a job she was successful at as being both interesting and fun (1.1) and utilizing her strengths (1.2):

…Um, I worked for, it's called 'Little Sisters of the Poor'… They have nursing homes… it is really fun! … I talked to them. When they had a game, I like helped them with the game, Bingo. I helped them to set up for parties when they had parties, things like that. … Um, I am good at, um, telling, um, noticing when people are having a bad day, and when they need to talk to somebody about things….

Similarly, *Parent Twelve* described a successful job match as involving two elements. These elements were a stable workforce of people who could become friends (1.1) and challenge her child (*Student Twelve*) to utilize her strengths (1.2):

…What I see [is][*Student 12*] in an environment where it's the same people every day, and they become friends, and she is challenged. Once [*Student 12*] learns something she wants to take it ten steps higher…

The Director of the program described a student who had a strength (1.2) that was also an interest (1.1) that ultimately led to her being successfully employed:

…I will call her Judy. Judy really loved to categorize things, so that was a strength for her…And she loved the Pitney Bowes system…It is a very specific system and she really just loved that organization of it. So when a different opportunity became available…which had the same Pitney Bowes system, she – again – was very successful and that is where she was ultimately hired.

Lastly, *Employment Administrator Two* described a student whose disability (and the initial support that accommodated for it) not only did not interfere with essential job skills (1.3), but whose disability contributed to the student's strength on the job (1.2):

…Z is working for [firm x],...they take materials in and they adapt it so it can be made easily accessible to students with disabilities. I think Z being an individual who possesses a disability [is beneficial]. She is working independently now, when she started working [it was] with an employment and support staffer first. Then she exhibited the skills and demeanor that she could communicate with co-workers independently…she is coming back with a real skill…she is really in her comfort zone there…

Theme 2.0: elements for challenging matches. Components that contributed to poor or challenging job matches were described in Theme 2.0 and involved:

(2.1) Being bored, being in the wrong environment or job expectations are frustrating;

(2.2) Not utilizing the individual's strengths;

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(2.3) Individual's limitations interfere with the job's essentially needed skills that

are not modified/accommodated for or trained for;

(2.4) Job is not realistically viable with competitive (or any) pay; and

(2.5) Individuals lack hands on experience, or

(2.6) Individuals are unaware of job preparation steps and skills, so they can not

make realistic choices.

The Director described a student who was having a hard time finding a suitable

job match because he was unaware that jobs need to start at the entry level (2.6). She

also indicated that other students who perhaps had never worked (2.5), had never been

exposed to what skill sets might have to be mastered for various positions (2.6):

> …Sometimes jobs are not always at the highest level to start. So I think that was
>
> the dichotomy for him. Not that he didn't have a good skillset, but that he was
>
> looking for positions that were not entry level. My other folks, may never, ever,
>
> have worked a job or position in their time, much less been exposed to, well, you
>
> know, there are these job areas, and if you need these, you need these skillsets…

Employment Administrator Two described a type of disability that could be a

serious challenge for employment, since it interfered with what is expected as a necessary

skill for most jobs (2.3):

> …Someone who does not necessarily have the best interpersonal skills would be
>
> tough to place, because a lot of our placements involve talking to people and
>
> communicating with your coworker and your boss. You have really got to find

somewhere where you can focus on their strengths, but at the same time make it

not be a problem that they not communicate…

Student Four described a job which was challenging for her because the job

expectations were frustrating (2.1): "…I worked at an office building doing office work,

it gave me headaches, but, but it wasn't my thing. Sometimes I had to work on one thing,

and down on another…"

Lastly, *Parent Five* described in her interview what she saw as a *disconnect*

between her experience of her daughter's (*Student Five*) lack of abilities (2.3), and what

the Department of Rehabilitation Services (DRS) perceived as her abilities. Her

description implied that the differences in perceptions of her daughter's abilities might be

a result of DRS not having had the opportunity to witness *Student Five* utilizing the

necessary skill sets for particular types of jobs (2.6):

> …But the kind of things that they [DRS] were choosing for [her] were culinary
>
> and child care…I would never have chosen those areas because I know that
>
> number one: no one is going to leave their child with [*Student Five*]. Her
>
> reasoning, her reactions, her assessing a situation is not necessarily good. And
>
> her fine motor skills for cleaning up a messy diaper are really not very
>
> strong…Then they moved on to culinary. Cutting up vegetables, she does that,
>
> but she is slow and laborious. She should not be on the backside of a restaurant
>
> and try to keep up…

Theme 3.0: Wide range of pre- CTP job preparation and training. Theme 3.0 described the varied preparation experiences that students had before they were enrolled in the CTP.

(3.1) student participants had only had job experiences based on convenience

(3.2) student participants placed in jobs based on assessments families had found to be inadequate

(3.3) student participants had little or no job experiences through either school or community

(3.4) student participants had chosen or had been placed in jobs based on their interests or aptitudes

(3.5) student participants received serious preparation which included skill and modification practice

(3.6) student participants had job experiences based on formal or interest assessments which had been deemed reliable by families

The Director indicated that the YES tool might be helpful to expose some of the program's students to employment possibilities that they might not have been aware of prior to viewing the videos. She mentioned that since the students not only came from different parts of the state, but also different parts of the United States, their job preparations and experiences were varied. She also indicated that while some came from actual vocational based programs that involved practice with skills, or perhaps even practice modifications and/or accommodations (3.5), some students had little or no job experience through either school, or community (3.3):

…I think it [the YES tool] would expose the students to different areas that they

may not have been aware of…My Northern [state] students have some job

exposure and some job training.… Some people come from [D] or [P] which are

vocational kinds of settings. Not the case with some of my folks who are from

different states…especially my people coming from the [HH] area just don't have

that, so they may never, ever have worked a job or position in their time…

Parents' descriptions of their children's job preparation illustrated that their job

preparations covered a wide spectrum. For example, *Parent Three* described her son's

high school job preparation experience as being quite thorough. He was given aptitude

sessions and then placed in job opportunities that were based on those results (3.6):

…[they] had aptitude type sessions for what type of jobs he might be good at.

Then they actually met him, based on the results of that, he actually tried some of

those things…

Parent Four, on the other hand, shared that her daughter was also given aptitude

tests, but she found the results of the assessment to be faulty, and inadequate (3.2):

…They provided one [an aptitude test] that showed – I loved this (laughs) – that

she was good at a hospital…I should know; I work at a hospital…That she should

be capable of doing that? So, the aptitude test I thought was pretty useless…

Parent Two explained that her daughter's employment preparation was based

solely on what was conveniently available, not upon any of her daughter's personal

attributes (3.1). She said, "…but the job was basically based upon availability,

convenience, and transportation, as opposed to her individual needs."

In contrast *Parent One* and her daughter *Student One* described a successful job preparation experience that involved internships, and practical experience developing lesson plans and implementing them in a classroom (3.5). *Parent One* shared:

A successful job placement was when she was working for Head Start. That was part of a high school program….so she had a learning component to it. There was a practicum where they would go in and observe and finally they were making lesson plans, and then see how those would work and not work. So, that had a lot of feedback to it and (inaudible) experience in a short amount of time….

When interviewed separately, *Student One* explained the variety of internship experiences she had based on her interest in teaching (3.4):

Yeah, I did internships in high school. I did an internship at a public school as an art teacher assistant and that was for grades first through sixth grade. But most of the time that I was there it was for third through sixth grade. And then I have also [done] an internship there just in a classroom with a second grade…

Lastly, *Parent Three* described her son's high school job preparation experience as being quite thorough. He was given aptitude sessions and then placed in job opportunities which were based on those results (3.6):

…[they] had aptitude type sessions for what type of jobs he might be good at. Then they actually met him, based on the results of that, he actually tried some of those things…

Theme 4.0: Steps of the CTP's job preparation. There are specific job preparation steps that every student takes during their four years in this CTP program

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before graduation. It was important to concretely identify these steps in order to better ascertain if there was a realistic need, and if so, a possible integration place for the YES job search tool within this particular CTP program.

The Director, Employment Administrators, and some parents detailed this CTP program's process. As mentioned above, during the first semester of their first year all students take a job preparation class where they practice writing resumes, interview skills, and other job preparation basics (4.1). Before each of the following semesters a Person-Centered Planning meeting (PCP) is held which involves the Director, the student, and at least one parent/guardian (4.2). Together, they all discuss suitable job possibilities based on past experiences, interests, and aptitudes and come up with three top choices for the student. These choices are passed along to the Employment Administrators, who will then work to place the student in a semester-long job that fits within one of these job categories.

Each semester the job site coach assigned to that student writes up a situational assessment, and the student records personal reflections about the job experience in a work journal (4.3). Choices about job matching suitability are therefore based primarily on conversations, and trial and error (4.4).

Each student experiences seven different trial job positions before graduation (4.5). Again, all of these positions are on campus for the underclassmen, and some can be off campus for the upperclassmen. Formal assessments and final permanent employment are left up to the Department of Rehabilitation services (DRS) following college graduation (4.6).

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Theme 5.0: Elements to expand CTP's job preparation program. Theme 5.0 describes how most of the participants expected the use of the YES tool could possibly enhance the program.

(5.1) expand the assessment and validation of students' strengths, interests and job specific modification or accommodation needs

(5.2) expand realistic job option choices that match interests and skills,

(5.3) expand knowledge of job preparation skills, and suitable modifications or accommodations

(5.4) provide information for on-site modifications/accommodations guides for job practicums

(5.5) more concretely clarify or validate interest/skill match options

(5.6) leave less up to Department of Rehabilitative Services (DRS) to do following the student's graduation

(5.7) close the gaps between pre-CTP exposure/assessments

The Director indicated, that she would be especially interested in this tool since it would help close the gaps of job awareness between students by assessing interests, strengths, and modification needs during their first year (5.1), (5.7), and leave less up to the Department of Rehabilitation Services to help students figure out after graduation (5.6):

One of the reasons that I wanted you to test this was to see if we want to incorporate this in our first year. First semester, first years are classroom based, so we could easily incorporate [the YES job search experience] into there, or,

once every three weeks [when] the students don't go to their job placements…we

can incorporate it into other areas of the curriculum…Right now, we have left it

all to DRS; I don't know if that's a great thought… Again, I think that considering

areas that they have never considered before…and then looking at those

proclivities and strengths towards different aptitudes. I think that is really helpful

even for near typical people.

The Director was joined by a parent of a senior student (*Parent Twelve*) in the

desire to accomplish more realistic and concrete job preparation before graduation, rather

than relying so much upon the Department of Rehabilitation Services afterwards (5.6).

Parent Twelve was additionally hopeful that the YES tool might help the CTP

program expand beyond the current *practicum experiences* enabling future students to

experience more of the reality of work experiences that are realistically available to them

(5.5):

> …So, I think they've kind of spoiled her. Which worries me because now we're
>
> going off the 'no more [CTP] cliff'…where there's the real world of
>
> employment…I don't think she's had enough exposure to the real world of
>
> employment…She's been involved in little, you know, practicums, little practices
>
> here and there, but I don't think she has any idea…and if you leave this to the
>
> county? Horrid, horrid…

Parent Nine shared that she was hoping that the YES tool could identify more

realistic job choices matching her daughter's interests and strengths (5.2), along with

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providing information regarding what training for necessary skills would be needed so that her daughter could actually accomplish those skills (5.3):

> …really the kind of information we need is aptitude and abilities related to what seems possible for training, and what she's capable of now, and what seems possible WITH training, and what does not seem possible…

Parent Ten was particularly interested if the use of the YES tool could help identify paying job possibilities that her son would be able to maintain interest and focus on (5.2):

> …I would be interested in what he could persist at for a period of time…without losing focus…doing something that would be, um, of value to somebody to the extent that they would pay him to do it, and his being able to stick it out more than, you know, an hour, or a couple of hours ...

Parent Five expressed the desire for the YES tool to better clarify how her daughter (*Student Five*) might compete for realistic job opportunities (5.2) with able mind and bodied individuals (5.5):

> …Where would [*Student Five*] fit in the ranking to get hired somewhere with individuals with very sound mind[s] and body[ies] competing?

Both *Employment Administrators One* and *Two* felt that the use of the YES tool could not only clarify what they perceived as students' interests, strengths, and modification needs (5.1), but also expand realistic job choice options that could be offered as part of the program's practicums (5.2). For example, during an interview with the two Employment Administrators,

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Employment Administrator One said, "I think it would be interesting for me to see, to compare, how really well I thought, or think, I know these students." In response, the second Employment Administrator said, "Right, see how our relationships with the students match up with what this tests." The first Employment Administrator replied, "Some new things too, maybe. These things always reveal something that, maybe, you would not have thought…" Expanding on that idea the second Employment Administrator said, "Or a place we can start exploring job opportunities, work with those types of businesses…"

Parent Eleven was particularly hopeful that a tool like the YES tool could help the CTP expand their discovery and use of accommodations, especially technological instruments, that could assist her daughter (*Student 11*) in compensating for necessary on-the-job skills (5.4):

> …What I would like more information on, is I know that there are so many ways
>
> to support individuals…like [*Student 11*] in the areas that they're not strong
>
> with…I'm very interested in assistive technology…and between you and I, I'm
>
> disappointed at the lack of integration of that into the CTP curriculum, both in
>
> terms of educationally and vocationally…because you know [*Student 11*]'s
>
> inability to read and write, and some of her missing executive functions, if you
>
> will, you know, I know for a fact, you know, there are resources that could be
>
> brought to bear on the situation…

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Lastly, *Student Three* was looking forward to picking job possibilities from videos. He related, "[picking job possibilities from videos] would help me focus, write notes about things that they're talking about, help me focus…" (5.5).

Theme 6.0: Unsure tool could be useful. Of the twelve sets of parents and the twelve student participants, only two parents and three students were unsure of the YES tool's usefulness (Theme 6.0). One parent and her fourth-year daughter felt that they had enough knowledge about appropriate job placement, and that she had become adequately prepared as a result of participating in the college program and therefore did not require additional tools such as the YES job search program. One parent expressed that her child had negative experiences with formal assessments in the past, and therefore, felt that the YES aptitude assessment protocol would be useless. The remaining two students were just not sure that the tool could be useful.

To summarize, most of the parents, students, employment administrators, and the CTP's program's director found that the goal of the YES job search tool was important as a possible addition to this program's job preparation program. All but five participants in the study indicated that the criteria for supporting the selection of good job matches must include individual's interests, utilize their strengths, and require skills that either the student's limitations would not interfere with, or appropriate modifications or accommodations could be provided in order to overcome individual deficits.

The opportunity for students to examine job opportunities that they might not have otherwise considered, and receive a profile that indicates their particular job related strengths, as well as specify what skills might have to be trained or accommodated for

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was seen as very beneficial. Both staff and parents expressed that such information might even lead to more individualized job practicums combined with more personalized training, modification, and adaptation exploration and practice. Moreover, there was considerable parental and staff agreement that the more students could actually be made ready for specific, realistic employment before graduation, the better their employment outcomes were likely to be post-graduation. They also emphasized the benefits of creating much less of a burden on the county Department of Rehabilitation Services resources by proactively engaging students in this form of career education prior to college graduation.

YES tool goals: Quantitative findings.   Descriptive statistics were run on the data compiled from the questionnaires completed by Employment Administrators, parents, and students.

Employment administrators and parents. The Employment Staff and Family Questionnaire on Goal Importance (Appendix A) was completed by the CTP Director, employment administrators, and parents in an effort to quantify their views on the potential importance of using the YES tool as part of the program's job exploration and preparation curriculum. This questionnaire involved questions regarding: (a) how important they felt being aware of an individual's interests, proclivities, and strengths/weaknesses are in making a successful job placement; (b) how much more information they felt they needed regarding those interests, proclivities, and strengths/weaknesses; and (c) how helpful would they find a profile with three job possibilities, based on a student's job choices matched with their aptitudes and interests,

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to be in the job matching process. The questionnaire response scale ranged from one

(*none*) to five (*most*), and there were 14 respondents, since one parent was not able to

complete it the questionnaire.

All respondents found being aware of an individual's interests, proclivities, and

strengths/weaknesses to be very important in making a successful job placement, as

indicated in the following table.

Table 7

Descriptive Statistics: Parents'/Admin's Importance of Elements

Variable	N	Minimum	Maximum	Median	IQ	Mean	SD
Importance of proclivities	14	3	5	5	1	4.64	.65
Importance of interests	14	3	5	5	0	4.73	.61
Importance of aptitudes	14	4	5	5	0	4.91	.43

As shown, the minimum response for the importance of knowledge of proclivities

and interests on a five-point scale was three (*average*), and for knowledge of aptitudes

was four (*a lot*). The maximum response for all three elements was five (*most*). The

median response of importance of knowledge of proclivities, interests, and aptitudes was

five (*most important*) for all three. This is also reflected in the means of all three, which

range from 4.64 (proclivities) to 4.91 (aptitudes). The very small standard deviations and

interquartile ranges for all three elements (standard deviation: .43 to .65; interquartile

range: 0 to 1) indicate that the responses were tightly dispersed and clustered around five

(*most important*).

The table below depicts Likert scale responses that quantified that the respondents thought that they needed an average amount of more knowledge about students' job related interests, proclivities, and aptitudes, but that they projected the job profile produced by the YES tool to be extremely useful for students' career exploration and successful placement.

Table 8

Parent/Administration: More Knowledge Needs/Projected YES tool Usefulness

Variable	N	Minimum	Maximum	Median	IQ	Mean	SD
How much more interests	14	1	5	3	3	3.18	1.51
How much more proclivities	14	1	5	3	3	3.36	1.34
How much more aptitudes	14	2	5	3	2	3.73	1.02
Profile projected usefulness	14	3	5	5	0	4.64	.73

The minimum response on a five-point scale for how much more knowledge was needed about interests and proclivities was one (*none*), and about aptitudes two (*a little*). The maximum response for all three were five (*maximum amount*). The median response for the need for knowledge about all three elements was three (*average amount*). This was also reflected in the means for all three that range from 3.18 (interests) to 3.73 (aptitudes). The standard deviations (SD) for these three elements ranged from 1.02, for more knowledge need about aptitudes, to 1.51 for more knowledge need about job related interests. The interquartile ranges (IQ) ranged from two, for more knowledge need about aptitudes, to three for more knowledge needed about both interests and proclivities.

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These larger figures for both standard deviations and interquartile ranges indicate a wider dispersion and lesser clustering of responses.

The minimum response for the projected usefulness of the YES tool job profiles on a 5-point scale was three (*average usefulness*) and the maximum was five (*most useful*). The median response was five (*most useful*). The very small figures of standard deviation for projected usefulness (.73) and the interquartile range (0), indicate that the responses were tightly dispersed and clustered around five (*most useful*).

To summarize, the quantitative responses of parents and staff indicated that most of these participants perceived that knowledge of students' interests, aptitudes, and proclivities as very important considerations. Their responses indicated that though most of them thought that they needed an average amount of more knowledge about their students in these particular areas, they considered the projected usefulness of the goal of the YES job search tool to be most useful.

Understanding possible sources of the discrepancy between respondents' perceived average level of need for more knowledge, and their projection that the use of the YES tool could be still be very useful, will be discussed in Chapter Five.

Students. The 12 student participants were given a three question, three-point Likert scale style questionnaire (Appendix C) to quantify their views on the potential importance of using the YES tool as part of the CTP's job exploration and preparation curricula. The questionnaires asked the student to rate: (a) how they felt about their present job; (b) how they felt about their previous job; and (c) how helpful they felt watching videos showing different job opportunities was for their own career exploration

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process. The three-point scale ranged from one (depicted with a frowning face icon)
indicating *unhappy with/no*, two (depicted with a neutral face icon) indicating *just
ok/doesn't matter,* to three (depicted with a smiling face icon) indicating *happy with/yes*.
The following table shows their responses.

Table 9

Student Views on YES Tool Goals

Variable	N	Minimum	Maximum	Median	IQR	Mean	SD
Feel about current job	9	2	3	3	1	2.75	.46
Feel about past job	11	1	3	3	2	2.38	.92
Job video helpfulness	12	1	3	3	1	2.50	.76

Nine out of the twelve students rated their current jobs, since three students were
in the first semester of their first year and were not yet working. Eleven out of the twelve
students responded to the question asking them how they felt about their past jobs, since
one had not worked before. All twelve students rated how helpful they thought watching
job videos would be for them to prepare for employment.

For the nine students who were currently working, all of them found their current
jobs to be at a minimum of two, *ok*, with the most likely responses falling in the middle
of the range of responses to be a three, *happy with*, as shown by the median three. The
mean of 2.75 also reflects that outcome, and the small interquartile range of one along

with the small standard deviation of .46 indicate that the responses were closely clustered around three. The eleven students found their past jobs to range from a minimum of one, *unhappy with*, to the maximum of three, *happy with*, with the most likely responses falling in the middle of the range of responses to be a three, *happy with*, as shown by the median three. The fact that the mean of 2.38 could be rounded to two, and the interquartile range (two) and standard deviation (.92) are larger, show that there is a wider dispersion within this larger range.

Finally all twelve students found that the help that could be provided by watching job videos ranged from a minimum of one, (*no)*, to a maximum of three, (*yes).* The interquartile range of one indicates that the most likely responses were tightly clustered around three, *yes*. The mean of 2.50 can be rounded to three and the smaller standard deviation of .76 also reflect this clustering. However, the range of responses is wider, since it's from one to three, rather than two to three. In conclusion, most of the students did think that using a tool which shows job options through video could be a helpful addition to the career education program.

Question Two

To what degree do the staff, students, and their parents, find the *procedures* of administering this tool *acceptable*? For instance, was it easy for both staff and students to administer and understand? Could the 106-item aptitude protocol be efficiently completed by staff and/or parents? Did the students find the tool enjoyable and easy to use? Did staff and parents find the tool cost efficient?

This question was informed primarily with: (a) short answers about cost effectiveness from all twelve parents and the administrative staff, time effectiveness and ease of completion of 106-item protocol from the three administrative staff and the seven parents who completed the protocol; (b) Likert scale questionnaires and short answer questions administered to students after using the tool; (c) quantifying the frequencies of positive and negative acceptability indicators observed while each student used the tool; and (d) Likert scale and short answer questions administered to the general staff members after they completed the 106-item YES protocol for all twelve students, during several staff meetings.

YES tool cost and ease of completion: Parents and administrative staff.
Parents and Administrative staff evaluated how they perceived the cost effectiveness of the YES job search tool. The parents and Administrative staff also gauged the ease of completion of the 106-item aptitude protocol for the students.

Cost effectiveness. All twelve sets of parents and the three administrator staff members were asked about the cost effectiveness of the YES tool. The Director, the employment administrators, and all of 12 sets of parents indicated that the cost of twenty dollars per student for the YES program access was extremely affordable.

Ease of completion. Parents and Administrative staff assessed how long it took to complete the 106-item aptitude protocol for each student, and what ease or difficulties they encountered.

Parents. The seven parents who chose to complete the 106-item YES protocol indicated either in notes on the protocol or verbally to the researcher, that it only took a

mere 15 to 20 minutes to complete. The only difficulty four encountered was quantifying

their child's skill level in comparison with typical individuals. One parent wrote on the

protocol, "I'm afraid this makes her look dumb as a rock."

Administrative staff. The two employment administrators indicated that the

completion of the 106 item YES protocol was acceptable in terms of time spent and ease

of completion. Since the student staff members at this program only had partial

information regarding the students' various aptitudes, having multiple staff members with

divergent knowledge about the students was the best option. Because of this, the

Director, indicated that the protocol completion, which took several staff meetings, was

too time consuming. If the YES tool would be used, she felt that it could be completed by

family, "The questionnaire, which is manic, … we can probably get from the families at

that point, so it would be a lot less time commitment."

YES tool's procedure acceptability: Student perceptions. Students' perceptions

of how informative, engaging, and easy to use they found the YES job tool were

collected by their questionnaire responses, as well as their observed behavior using the

tool.

Student responses. The Students' Procedure Acceptability questionnaire

(Appendix E) was administered to the students after they used the YES program video

tool. Recall that this questionnaire involved two Likert scale three-point questions, and

three short answer questions.

The first three-point scaled question asked students to rate how easy the program

was to use, with a frowning face icon signifying *very hard*, a neutral face icon indicating

ok, and a smiling face icon representing *very easy*. Only one student (8.3%) found the program to be *very hard,* while six (50%) found it to be *very easy*, and five (41.7%) found it to be *ok* in terms of ease of use.

The second three-point scaled question asked them to rate how interesting the program was, with a three-point range from *not at all* to *a lot* represented by the same face icons as the first response options. No students found it *not at all* interesting, while ten (83%) found it *a lot* interesting and two students (16.7%) found it to be just *ok* in terms of capturing their interest.

The students were asked three short answer questions regarding what they found the most interesting, the most difficult, and whether they thought this would be a good way to learn about jobs. What most students found to be interesting was the wide range of job possibilities; some of the jobs they had never heard of, and some they had never considered for themselves before they viewed them being demonstrated on the videos.

Many students especially enjoyed watching and listening to the important and essential components of each job they were interested in exploring. *Student One* stated, "Before I tried this program, I thought I had already made a decision about what job I wanted to get when I graduate. I saw some other possibilities, however, that I realized I could do and that were interesting."

For some, the YES videos and job profile enabled them to determine if particular jobs matched their own perceptions of their abilities. *Student Twelve* shared, "I got to watch and see if the job would be too difficult. That's very important."

One student expressed that she was frustrated when the "indoor vs outdoor" job option on the YES program menu did not work. One of the male students was disappointed because he was looking for a Sports Manager type of position which was not one of the job options represented. All the students thought that the YES tool was a good way to learn about job possibilities.

Observations of students' acceptability behavior. Observation data was recorded for eleven out of the twelve students as they individually used the YES tool. Recall that one of the twelve observations was not recorded due to the fact that the video recorder malfunctioned when one of the students was using the program. Data for this observation were not included in the final analysis. The following table depicts the frequency of observed behaviors.

Table 10

Frequencies of Observed Students' Acceptability Behaviors

Behavior Indicators of Acceptability	N	Percentage
Facilitator Needs to Take Over	8	73%
Students Engaged, Focused	10	91%
Students Smiling, Laughing	6	55%
Students Lose Interest: Looking Around; Ask if They're Done	2	18%
Students are Frustrated: Express Verbally, through gestures/sounds	3	27%

Nine students (82%) needed little to no assistance, beyond a brief explanation of how to work the researcher's lap top, instructions about the program's options, and explanations about some of the job terms, (e.g. paraeducator). In terms of the ease of use observation tallies, there also were several students that wished there was a *maybe*

indicator, rather than just *like* or *don't like* (thumb's up or thumb's down) response options. The researcher did need to take over for the program in the case of eight students (73%) at the end, however, when it came time to narrow down their choices to only three, because it turned out that program could not calculate their aptitude matches with more than three selected job choices at a time.

What was discovered, was that the computer program did not save any of the job choices that had not been selected for the first matching calculation; the other choices beyond the three used for the first calculation were lost. The researcher, therefore, wrote down the students' additional choices for the students. After the first round of calculations was complete, the students input their additional choices into the system for the next round of calculations. The program could therefore run aptitude matches on those, as well, without having the students go back and choose jobs to explore all over again. The three students who did not need such assistance had only chosen three job options, so there was no problem concerning about losing additional choices after the first calculation.

The interest level observation tallies showed that ten out of the eleven students (91%) remained engaged, interested, or focused while they were using the program, and six students (55%) outwardly showed enjoyment by smiling, laughing or commenting. Two students (18%) lost interest by either asking if they were done, or looking around while the videos were playing. Three students (27%) showed some level of frustration which was expressed. One of these three really wanted to use the indoor/outdoor comparison option rather than job category one, but the indoor/outdoor option was not

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functioning properly. Another was so intent on the videos, that she wore herself out, and needed to take a break. The last student had a job set in his mind which was not presented as an option.

YES tool's procedure acceptability: Staff perceptions. Fifteen staff members were present during the staff meetings when they collaboratively completed the 106 item YES protocols for each of the twelve students. The Staff Procedure Acceptability Questionnaire (Appendix S) was administered to them later to ascertain how acceptable they found the collaborative process of completing the protocols in terms of time, effort, accuracy, and whether they would prefer others (such as parents) to complete it instead. The three questions used a five-point Likert scale ranging from one (*least*) to five (*most*). No staff member added any comments or suggestions.

In terms of assessing how successful the group collaboration was completing the students' 106 item aptitude protocols, three (20%) thought they had done an *average job*, ten (66.7%) thought they had done a *better than average job*, and two (13%) thought they had done an *extremely successful* job.

When the staff rated how acceptable they found the tool, considering the time and effort it took them to complete the protocols, six (40%) found it to have *average* acceptability, seven (46.7%) found it to have *better than average* acceptability, and two (13.3%) considered it to have *extreme* acceptability.   Lastly, when the staff rated how much better it would be to have others complete the protocol, eight (53%) thought that it would be an *average* amount, four (26.7%) thought it would be a *better than average amount*, and three (20%) thought it would be *extremely* better.

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In summary, students found the YES job search tool to be fairly easy to use, interesting, and informative. They especially enjoyed being able to watch the essential job skills being performed, and becoming familiar with jobs they had either never heard of, or had not considered for themselves.

The staff felt that the 106 item YES aptitude protocol was fairly easy to complete collaboratively, though having it filled out by others was also either acceptable, or maybe preferred. The Employment Administrators also felt that it was acceptable to have the staff complete the aptitude protocol, though the Director felt that it was too time consuming for her staff to have to complete as a group.

The parents who completed the aptitude protocol said that that it was not too time consuming to complete, taking only 15 to 20 minutes, though they indicated that it was confusing rating their children's specific aptitudes; parents said that they were not sure whether to compare them to the non-challenged population or individuals who were similarly challenged.

All of the parents thought that the cost of the YES tool per students was extremely cost effective. The administrators agree with the assessment that the low cost made the program highly accessible to students and their families.

Question Three

Recall that the third question involved in this study was: To what extent do the staff, students, and their parents find the effects of administering this tool useful for this post-secondary program? For example, how much, if any, does the information garnered help staff, students, and their parents, enhance the information gathered from the

ecological assessments for job exploration and training used previously? The following

presents data that inform this question beginning with qualitative findings.

      YES tool's outcomes: Qualitative findings. There were three basic themes

identified indicating the participants' perspectives of the effectiveness of the YES tool.

These themes were derived from analysis of the interviews conducted with the Director,

employment administrators, parents and students focused on their perceptions of the: (a)

positive elements, (b) negative elements, and (c) future use possibilities. Some of the

elements of these themes were also triangulated with the results of the Likert scale

questionnaires that the Director, employment administrators, students, parents,

employment instructors or work-site support personnel completed, that will be presented

in the next section. The following table depicts the participants' frequency of responses

categorized by theme and sub-theme elements regarding their perceived effectiveness of

the YES job search tool and its potential for use in this CTP program.

Table 11

Question 3 Interview Themes: 1.0 - 3.0

1.0 Positive Elements	Dir	Employment Administrator	Parent	Student	Total
1.1 New job possibilities	1	2	8	8	**19**
1.2 Self Discovery/ improved job seeking prep	1	2	4	11	**18**
1.3 ID job specific strengths/weaknesses	1		4	3	**8**
1.4 Use for screening (adds breadth)	1	2	4	1	**8**
1.5 Motivated next steps			4	8	**12**
Totals	**4**	**6**	**24**	**31**	**65**
2.0 Negative Elements	**Dir**	**Employment Administrator**	**Parent**	**Student**	**Total**
2.1 Aptitude rating/matching questionable	1	1	5		**7**
2.2 Need more jobs esp. for non- rural	1		3	1	**5**
2.3 Students have difficulty generalizing from videos			5		**5**
2.4 Choices based just on interests	1		2		**3**
2.5 Accom/mod/tech support not listed			2		**2**
2.6 Protocol confusing based on non-challenged pop	1		2		**3**
2.7 Protocol too time consuming for staff completion	1				**1**
Totals	**5**	**1**	**19**	**1**	**26**
3.0 Future Use Possibilities	**Dir**	**Employment Administrator**	**Parent**	**Student**	**Total**
3.1 First Year students	1	2	2		**5**
3.2 Middle to high level students	1				**1**
3.3 Discuss job elements in class	1		1		**2**
3.4 Basis for Site Visits or Placements	1	2	7		**10**
3.5 Basis for mod/accom/tech support discovery	1	1	4		**6**
Totals	**5**	**5**	**14**		**24**

Theme 1.0: Positive elements. Theme 1.0 describes elements that were perceived

to contribute positively to the YES tool's effectiveness as an addition to this CTP

program job preparedness curricula. According to the participants' interview responses,

the most important positive elements were: (a) never known or considered job

possibilities could be discovered to possibly further investigate (1.1); (b) students could

learn additional things about themselves that could better inform themselves, their

parents, and the staff regarding employment preparation (1.2); (c) students, parents, and

staff could become better informed about students' individual job specific strengths and

weaknesses (1.3); (d) results could be used as an initial screening tool before on-site exploration is pursued (1.4); and (e) students, parents and staff could be better motivated to take next steps in the job exploration process (1.5).

Subtheme 1.1: New job possibilities. Many students and parents, employment administrators, and the Director, discovered that there were job possibilities either never known or thought of before (1.1). As "*Student Ten*" shared,

Um, what I found interesting is like all the different subjects they had on there, and I found something that kind of fits to my standards, I guess, in a way, and I want to try doing [it].

Employment Administrator One also was pleased with the discovery of additional job opportunities (1.1):

Yeah, there were some [job choices] that I had not thought about at all. There were some that I had not thought about for our students or that particular student…Once I heard those, it did make me think it might be a good fit, or at least an option to explore.

Parent Ten was happy that she discovered jobs her son was interested in that she had never thought about before, though she had already had a notion that that particular category of jobs interested him (1.1):

…so that was a useful reminder and reinforces that kind of vague sense I already had about how important that [blue collar work] was to him... You know, I'd just say, partly I'm sure it's because of the life we lead. I mean I don't hang out with welders.

Finally, the Director was pleased to see a new job possibility that had never been discussed by a student (1.1):

I think my biggest surprise was *Student Two*…the job match was restaurant cook….it had not been an area that she talked about before so that was really very new.

Subtheme 1.2: New person-specific knowledge. Students learned additional things about themselves, and employment administrators and parents learned more about their children/students that they thought could potentially enhance job preparation and exploration (1.2). For example, *Parent Five* discovered that her daughter had a proclivity that she never knew which could broaden job exploration (1.2), "I learned that she feels the desire to work outside. That is something totally new, and something we need to think about."

The process of watching videos of various jobs, and making choices about them was described as a self-discovery process by *Student Two* (1.2), "…I get to find out if it's the person that I want to be."

Employment Administrator Two felt that it was a much better way to discover students' interests and proclivities, since at this point, they just relied on asking questions (1.2), "We don't have a basis besides asking them questions, getting to know them… if I asked anyone a question they can give a random answer."

Subtheme 1.3: New knowledge about aptitudes. Parents, employment administrators, the Director, and students discovered specific information regarding strength and weakness of job related aptitudes that weren't known before (1.3). For

example, in the following quote, the Director communicated that she was pleased to discover that the YES tool was helpful in assessing the suitability of the match between a student's aptitude and the job she had chosen (1.3):

I thought it matched up really well with her proclivities and with her strengths and her weaknesses…Except for one weakness, which I think could be worked on – money skills – she really met thirteen of the strengths.

Parent Four related that she found it useful to actually see specifics about her daughter's job related aptitudes, rather than just relying on what she had thought they were (1.3):

I think intuitively that I probably have a good sense of what would be good jobs for her. The more specifics of delineating which she possesses that would actually make her good, instead of just my thought – in that. I do think it would be useful.

Similarly, *Student One* discovered that there were several jobs options that matched up well with her skill sets (1.3). She shared, "[I learned] there are more jobs out that there that I can do with my skills… like day care center or working in a gym as a personal trainer or exercise teacher."

Employment Administrator Two was shocked to see how low the aptitude match scores were for some of the lower level students, that would indicate that there were a lot of essential job related skills that would need to be modified, accommodated or trained for:

With [*Student 12*] and [*Student 11*]…all three of their scores were in the .20 …
even though they were the highest match, it is not a core match according to the
scale…in qualifying that data…so…That was a shock to me too.

Subtheme 1.4: Screening tool potential. The participants indicated that another
positive element of the use of the YES job search tool was that it operated as a screening
tool by providing additional information for future in-depth job exploration (1.4). For
example, *Parent Eleven* expressed,

I'd kind of written them [certain jobs] off, but I always had them in the back of
my mind because I do believe that there is adequate technology that could
intervene on her behalf, and she could go out and be successful.

The Director indicated that the tool was useful for establishing an understanding
of the students' entry points into career education. She said, "Then… [for] first year
students – I think I said in my original – I am not really sure even where to start with
those folks – so I think this [the YES tool] was a very good screening tool" (1.4).

Employment Administrator Two saw the possibility of using the tool for screening
changes and development through the students' four years (1.4),

Maybe they come in as a freshman set in these three different categories, they
score high on them all…and by the time they are a third or a fourth year they take
it again [after] they have had an opportunity to experience six different work
experiences…and maybe only one of those three are still on there. So, it would be
interesting to see.

Subtheme 1.5: Good preparation for next steps. The last subcategory of the first

theme of elements of positive results from using the YES job search tool indicated that

some of the information that was garnered motivated participants to prepare for taking

the next steps in job exploration (1.5). For instance, as mentioned above, when *Parent*

Five learned that her daughter really wanted to work outdoors, this new information

brought up some additional possibilities to explore that could utilize her daughters' gifts

and strengths:

> That is something totally new, and something we need to think about…maybe she
>
> could be outdoors giving history tours. That would fit in with her personality, her
>
> likes, good memory, that kind of thing.

> Furthermore, *Student Nine* indicated that she was ready to plan some next steps

with the new information about job possibilities that she had discovered:

> The researcher asked, "…there are a couple of jobs that might [be] good matches
>
> for you, what would be the next step that you would like to do?"
>
> *Student Nine* replied, "One is to tell my parents what I have learned, and get them
>
> involved with it...And the next step would be working on my initiative."

> Both employment administrators agreed that the job selections contributed new

options to those that the students had previously talked about. In some cases, working

with the YES tool brought to the administrators' attention jobs that they had not yet

thought about as potential options for the students. *Employment Administrator One*

shared:

> …just being exposed to some of the jobs [other] than what they normally think of.
>
> I think there was a home painter…Like you said, amusement park worker,

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gardener, dairy farm worker…things you might not think of…maybe [not] for our students, in particular. Once I heard those it did make me think it might be a good fit, or at least an option to explore. Obviously [for] the first years as well.

The Director had already started to plan how the program might add the YES job search tool to the program curricula:

Yeah, I think especially for our first-year students …the first thing we do is class-based. The first semester that they are here they hone their resume…I think that would be a nice time to do that. The questionnaire [the 106-item aptitude protocol] which is manic - we can probably get from the families at that point. So, it would be a lot less [administrative] time commitment… Then I would probably say that we could administer it – depending again on the student- throughout the first 15 weeks. Even if it is a half hour in week two and then a half hour a week - I think we can get with that pretty nicely.

Theme 2.0: Negative elements. Theme 2.0 describes elements which were perceived to contribute negatively to the effectiveness of the YES tool as an addition to this CTP program job preparedness curricula. According to the participants' interview responses, the most important negative elements were: (a) the validity of the aptitude rating and matching for certain jobs was questionable (2.1); (b) there is a need for more job choices in certain categories like television, radio, sports related, and more options for non-rural students (2.2); (c) some students have difficulty generalizing from just watching videos (2.3); (d) choices are made based solely on interests first, rather than categorizing first according to jobs which better match their aptitude levels (2.4); (e)

appropriate accommodation, modification, and/or technological support need to be provided for weaknesses that are identified, so that students, staff and families can better prepare, initiate training, and students can self-advocate; (2.5); (f) the 106 item aptitude protocol was confusing because the descriptions are based on a non-challenged population (2.6); and (g) the 106 item aptitude protocol was too time consuming for the staff to complete (2.7).

Subtheme 2.1: Aptitude rating/matching questionable. Some of the parents and administrators found that the aptitude rating and subsequent rating for job choices seemed to be questionable. For example, *Parent Four* expressed her concern that her daughter's scores, which both fell in the *fair match range* did not properly reflect her daughter's strengths or limitations (2.1):

> So, see that is what is kind of absurd. Hairstylist is .56 and childcare worker is .56. That is where my frustration is. There is no way that she can be a hair stylist… They are coming up in the same category of fair - where I think one is totally subjective, [and one] is probably a much more clear match than the other.

In particular, the Director expressed that she did not think the aptitude rating and job matching data were valuable for those in the *low level* grouping with more cognitive deficits (2.1):

> Then the other thing I can clearly see a dichotomy of the more skills – I should say the more cognitive skills- the student has the more accurate this is. So, remember when we talked about whether this was effective for lower, or middle

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or higher – definitely based upon looking at the scores of my group …middle or higher. I do not feel that this is a very good tool for low.

Parent Eight was concerned that his son scored so low on basic reading and math skills necessary to be a baggage porter. This parent raised the question asking were the rating in those areas not correct, or was his son not doing the school work necessary to progress sufficiently? (2.1):

…getting back to what you said about the skills sets that would need work…he is a Junior now; he should be well through most of the things listed… Even as baggage porter, (inaudible) to us that is a bit of a revelation. It is very important information on learning and skill set...Because he is so likeable and so easy to get along with and so easy-going that he might be slipping through the cracks…

Parent Five thought that the positive ratings for her daughter (*Student Five*) to be a dairy farmer were not at all valid (2.1):

I think a tool like that is good. I kind of think it may need some tweaking and shaping a little bit…you know? To come out to say [*Student Five*] could be a dairy farmer …for example, I know what it takes to be a dairy farmer. On top of that, outdoors and liking animals outdoors [it] needs brute strength and endurance, and very good financial kinds of skills to make a living doing that.

Subtheme 2.2: Tool needs to have more job choices for non-rural students. The Director and several parents felt that the YES tool needed to provide more job options in certain areas. The Director expressed, "The other thing is that they must add more jobs. Like, they have to. No offense, [but] a dairy farmer is not really all that realistic…"

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Parent Six indicated that perhaps the reason her son did not pick the jobs he always talked about at home was because that category was either not shown in the YES tool inventory of jobs, or the offerings were limited. It should be noted, even though it is not specifically mentioned in the dialogue, media station jobs were not available among the 120 job possibilities to choose from (2.2):

Parent Six explained, "I was surprised with the three that came up actually. I thought he would have definitely been more interested in the two areas that I mentioned [weather station or sports arena] because that is really all he talks about. So, I was surprised at the choices."

To this comment, the researcher responded, "I think that the only areas that were perhaps linked with sports in terms of his choices – out of the 120 choices- would be like a recreation assistant. He was not interested in that… working in a sports arena or working with a sports team was not one of the options."

Employment Administrator Two was surprised that *Student Twelve* had not chosen a job working in a nursing home, which she had been doing and enjoying for three years. It so happened that nursing home assistant was not an available choice in the system (2.2). "Knowing [*Student Twelve*] for four years and having taken her to the Senior Living Center … at least a good three years now… I was surprised that that wasn't on there. I think I saw para-educator and childcare specialist."

Subtheme 2.3: Students can have difficulty generalizing from videos. Some of the students' job choices alerted their parents to the fact that their child most likely could not generalize, or envision themselves actually into the job situations that they were

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viewing. Parents indicated that their children might have been making job choices based on what they thought was interesting without considering how well the particular positions matched their aptitudes and proclivities (2.3). The exchange between the researcher and *Parent Three* illustrates this observation:

> The outcome that your job match survey shared didn't sound like him at all. The farmer thing, outside and animals…it is just not him at all. He is more or less afraid of most things. We wanted a puppy forever and then he decided …no! My neighbor has a cute little dog that is as sweet as can be but he is afraid of it because it is unpredictable…Yeah, you could not put him in a room with a cow.

Parent Five indicated that even though her daughter, *Student Five* was familiar with the family farm, her daughter really could not generalize about how much brute strength and hard, dirty work goes into farming (2.3):

> You know, we do have a family farm that she spends a lot of time on. She has her chores going out and clearing the yard and things like that. So, I can kind of see where she was going with that. But we also have friends who are dairy farmers because I grew up in the Shenandoah Valley and I happen to know that [*Student Five*] is not strong enough to do that. That is the reality. Now could she help somebody yeah…[but] she would not want to get that dirty.

Subtheme 2.4: Choices just based on interests. The Director, in particular, and a few parents were concerned that the choices the students made were only based on interests alone (2.4). For example, the Director shared her concern:

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Honestly, we have talked about this. I may want to be a concert pianist, but if I

don't have the aptitude, even if I am practicing 20 hours a day, I may not get

there. Or a basketball person… I may really want to play for the NBA but if I am

only 5'3 and ¾ …even if I practice many, many hours I am not going to get that

because that is a requisite of that job. I think that is important…to help… And it

doesn't mean that I can't be the best basketball fan ever and have lots of

recreational basketball and it doesn't mean that I can't be a recreational piano

player and continue to take lessons – but is that going to bring me income?

Parent Nine was also concerned that students need to go beyond their interests

alone, and come to an understanding about what aptitudes particular jobs require, as well

as the totality of what the job consisted of (2.3):

 I feel like any kind of interest …it's good to know everyone's interests, and that

type of thing…but I don't feel like any of the three that [*Student Nine*] came up

with would very good jobs…so…. I mean where I could see it could be useful is

you could begin the story by talking to the students and well let's think about

what's actually involved in these jobs, you know.

Subtheme 2.5: Expand on modification or accommodation possibilities. Some

 parents, in particular, expressed that the YES job search tool profiles could be greatly

improved if instead of just listing weaknesses that needed to be addressed for particular

job choices, corresponding modification, accommodation, or additional training options

should be also be listed (2.5). For example, *Parent One* shared:

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[I] would say that the accommodations be clearly laid out. Whatever job situation

that they are in, [so] that the student would be their own self advocate and say "I

can do this job, but this is the part that I would need help for". That is the part of

the program that is the weakest. I don't think that it prepared them for that at all.

Parent Eleven made it clear that with her daughter's combined disabilities, it was

really important to list the modifications, or the types of technical support, her daughter

could use to be able to work at job possibilities:

Well, now I'm not criticizing your study or anything, but I must say that I was

really disappointed with her low scores…because I think it does not take into

account, and this answers your question, what I would like more information on,

is I know that there are so many ways to support individuals…like [*Student*

Eleven] in the areas that they're not that strong with…to kind of assess…to assess

somebody for a job without taking into account the types of support that could be

provided, kind of presents a false picture.

Subtheme 2.6: 106-item protocol was confusing to complete. The 106-item

aptitude protocol is based upon the non-challenged population. The YES job search tool

software correlates each student's strengths and weaknesses with the necessary skills

required by their job choices. Though each item had an explanatory definition beside it

that corresponded to the so called *good* choice, there were no corresponding examples for

the *fair* or *poor* choices. Moreover, it was unclear if the individual was to be rated with

or without accommodations that they normally use. So, for example, for *mathematical*

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skills the corresponding description is, "Using mathematical skills to solve problems." It is unclear whether the use of a calculator should be included as a mathematical skill.

As the staff completed the aptitude protocol for each student, there was some discussion as to whether they should be comparing each of their students with others who were similarly abled, and with or without accommodations (2.6). Likewise, *Parent Ten* expressed that, "it was confusing about how to answer some of the questions" (2.6) and *Parent Seven* wrote that she was concerned that her answers made her daughter look, "as dumb as a rock."

Subtheme 2.7: aptitude protocol too time consuming for staff completion. As was indicated in a previous section, the Director decided that if the YES job search tool was to be used, the staff completion of the 106-item protocol for each member of the freshman class would be too time consuming. She expressed that it would be better to have the family complete it for their child.

Theme 3.0: Future possibilities for YES job search tool. Parents, the employment administrators, and the Director indicated what they thought would be the best possibilities for how the YES job search tool would be most useful if this curriculum were to be included in this CTP program on a regular basis. Most of these possibilities had already been expressed at the beginning of the study when the participants were interviewed about the social validity of the goals of the tool. The possibilities were that: (a) the YES tool would be the most beneficial to students if begun with the first-year students (3.1); (b) the tool is most effective to be used with the middle or high cognitive level students (3.2); (c) it could provide a good basis for specific job element discussions

in class (3.3); (d) it could provide new ideas for site visits or placements (3.4); and (e) it could be a good basis for job related modification, accommodation, and technical support discoveries (3.5).

Parent Two expressed that this tool would be most beneficial in the freshman year, before parents and students have had the chance to explore job choices (3.1):

> We had [already] looked into hordes of options where I was pretty aware of her interests and things. If we had not been in that process already when she was a freshman, then maybe [the YES tool process would have been] more helpful than it was for me.

As previously mentioned, a new discovery was made by the Director in that because of the sheer number of limitations reflected by some of the students' low scores, this tool would probably not be useful for those students with more severe cognitive limitations, and were in the low-level classes (3.2):

> Then the other thing I can clearly see a dichotomy of the more skills – I should say the more cognitive skills- the student has the more accurate this is… I do not feel that this is a very good tool for low [level students].

Parent Nine saw the tool as an excellent foundation for further discussion in class about everything particular jobs entailed (3.3). "I mean where I could see it could be useful is you could begin the story by talking to the students and well, 'let's think about what's actually involved in these jobs,' you know?"

It was suggested by *Parent Three* that this tool could be an excellent source for site visits, so students could have the opportunity to discover whether something they think is interesting is really what they would like to do as a job (3.4):

The next step might be to actually go to where you can see someone actually doing that…The idea of actually doing it as a job – oh, it LOOKED like fun – but [actual] work is not fun all the time.

The opportunity for students to partner with the University's advanced degree students in supportive technology was recognized by *Parent Eleven* as a good chance for students with lower level abilities to discover what tools might help them to be employed in jobs in spite of their many limitations (3.5):

.. here you have a person identified on campus, who, at your leisure, you could work with to…anything if you will…because she is there, she's living there, there's plenty of time, and so on and so forth, for her to be available, to be able to, um, anybody in the IT field that is working on their Masters or their Doctorate, just to able to work with her on a daily basis. And just, you know, let's try out this technology, let's see what indeed can be utilized that she can learn to use to support her in these areas.

To summarize, the parents, administrative staff, and students found the profile data produced by the use of the YES job search tool to be positively effective. The administrative staff, more than half of students, and parents found: (a) new job possibilities that had never been considered; (b) person-specific new discoveries, that enhanced job seeking preparation; and (c) ideas that could motivate next step

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possibilities. Some parents, staff, and students were able to draw on the tool to enhance

identification of job specific strengths and weaknesses, and to garner more information

about what is involved in a variety of types of jobs, adding to the job screening process.

There were some negative elements discovered in the use of the YES job search

tool, however, less than half of the participants voiced their concerns. Some study

participants found that: (a) they were unsure about the accuracy of some of the aptitude

rating and matching scores; (b) some students might have some difficulty actually

imagining themselves doing the work that they viewed on the videos; (c) some types of

jobs were not presented, or there were too many rural options; (d) it could be beneficial if

the software added a filter that could categorize jobs by aptitude levels; (e)

accommodation and/or modification examples should be listed next to students' job

specific weaknesses; (f) the 106-item aptitude protocol was confusing sometimes

confusing to complete, since the development of this protocol was based on the non-

challenged population; and (g) the Director noted that in light of administrative time

restraints, it would be better for family, rather than staff members, to complete the 106

item aptitude protocol for the students.

Participants described a number of possibilities for future potential uses of the

YES job search tool at this particular CTP program that mitigate for the shortcoming of

the tool. In order to compensate for some students not being able to generalize, or

imagine what doing a particular job might really be like, it was suggested that the

students' choices be also used as bases for class discussions, site visits, or trial

placements. Additionally, parents as well and the administrative staff saw that the

weakness areas listed on a job profile could be a good starting point for investigating possible modifications, accommodations, and technical support available to make particular jobs accessible.

YES tool outcomes: Quantitative findings. The Employment Support Staff/Instructor and Parent Effectiveness Questionnaire (Appendix Y3) was a short answer and Likert scale style questionnaire that the employment support staff or instructor, and the parents completed in effort to quantify their views on how informative they found the students' YES tool job profiles. The questionnaire involved: (a) a Yes or No response format question regarding whether they learned anything new about this student's job interests and corresponding aptitudes; (b) a Likert scale question regarding how useful they found the YES tool job profile information regarding the student's job interest; and (c) a Likert scale question regarding how useful they found the corresponding aptitudes description for each of the student's job preferences. The Likert scale ranged from one (*none*) to five (*most*). All 12 parents completed it, and 11 out of the 12 support staff/instructors completed the questionnaire.

Employment support/instructor results on tool effectiveness. Seven (63.6 valid %) of the employment support/instructor staff indicated that they had learned something new about the students' job interests and corresponding aptitudes. Their responses also indicated that they found the students' YES tool's job profiles to be useful in terms of knowledge garnered about both interests and aptitudes, as shown in the following table.

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Table 12

Descriptive Statistics: Support Staff/ Instructors Views of Profiles' Usefulness

Variable	N	Min	Max	Median	IQR	Mean	SD
Usefulness re: interests	11	2	5	3	1	3.45	1.036
Usefulness re: aptitudes	11	2	5	3	2	3.64	1.027

As shown, the minimum response for the usefulness garnered from the students'

YES job search profiles' data about both job-related interests and aptitudes was two (*a*

little). The maximum response for both was five (*most*). The median responses of the

usefulness of their profiles data regarding students' job related interests and aptitudes

were both three (*of average usefulness*). This is also reflected in the means of both, which

ranged from 3.45 (interests) to 3.67 (aptitudes). The small standard deviations and

interquartile ranges for both elements (standard deviation for aptitude:1.027 to 1.036 for

interests; interquartile range: one for interests to two for aptitudes) indicate that the

responses for both were somewhat closely dispersed around three (average usefulness).

In summary, the support staff and instructors found the information garnered from

the students' YES job search profiles about both job-related interests and aptitudes to be

of average usefulness. Next presented are the parents' results related to their opinion of

the effectiveness of the tool.

Parent results on tool's usefulness. Seven out of twelve parents (58.3 valid

percent) responded that they had learned something new about their child as a result of

reading their child's YES job search tool profile. The parents responded that they did

find the YES job search tool profiles to be useful in surfacing new information regarding their son or daughter's job preferences and aptitude for those jobs as represented in the table below.

Table 13

Descriptive Statistics: Parents' Views of Profiles' Usefulness

Variable	N	Minimum	Maximum	Median	IQR	Mean	SD
Useful re: Interests	12	2	5	3	3	3.42	1.17
Useful re: Aptitudes	12	1	5	3	3	3.08	1.51

The parents' minimum response for the profiles' usefulness about their children's job related interests was two (*a little*), while their minimum response about their children's job related aptitudes was one (*none*). Their maximum response for both interests and aptitudes was five (*the most*). The median response for both aptitude and interest usefulness was three (*average*), which is also reflected by the interest mean of 3.42, and the aptitude mean of 3.08. The large interquartile range for both interests and aptitudes of three indicates that the responses were widely dispersed between two (*a little*) and five (*the most*) for interest usefulness, and widely dispersed between one (*none*) and five (*the most*) for aptitude usefulness. This wide dispersion is also reflected by the standard deviations of both interest (1.17) and aptitude (1.51) usefulness.

In summary, parents were more likely to find that the profile results on both job related interests and aptitudes produced an average amount of usefulness. The fact that

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the parents did not indicate that the profile results were as useful as they had expected, will be discussed further in Chapter Five.

Administrative Employment staff results on tool effectiveness. The Administrative Employment Staff Questionnaire on the Effectiveness of the Tool (Appendix F) was a yes/no and five-point Likert scale style questionnaire that the Director and the two employment administrators completed about each of the twelve students after they had reviewed their individual job profiles that were produced by the YES job search software. The four yes/no questions asked if they found anything new about: (a) student's job interests, (b) job proclivities, (c) job aptitudes, and (d) job possibilities.

The Likert scale questions asked the staff member to rate the usefulness of the profile(s) for each particular student. The scale ranged from one (*none*) to five (*most*). The profile gave suitability scores for three job choices that the students had chosen, and listed the corresponding strengths and weaknesses for the highest scored job. *Weaknesses* listed on the job profile were areas that indicated additional training, accommodations and/or modifications would be needed for the student to successfully meet what the YES tool had shown to be necessary for that particular job. For students who picked more than three jobs, additional profiles were produced.

The averaged results of the three administrators indicated that they learned something new about (a) nine out of 12 students' job interests (75%), (b) 9.7out of 12 students' job proclivities (80%), (c) 10 out of 12 students' job related aptitudes (83%), and (d) nine out of 12 students' new job possibilities (75%). All three administrators'

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responses showed that they found the profiles to be useful, as shown in the following

table.

Table 14

Descriptive Statistics: Employment Administrators Views of Profile Usefulness

Variable	N	Minimum	Maximum	Median	IQR	Mean	SD
Employment Administrator 1 Profile Usefulness	12	3	5	5	1	4.50	.67
Employment Administrator 2 Profile Usefulness	12	2	5	4	2	3.58	1.09
Director Profile Usefulness	12	1	5	4	3	3.33	1.49

The minimum responses for the usefulness of the job profiles produced by the

YES tool ranged from the Director's score of one (*none*) to *Employment Administrator*

One's three (*average*). The maximum responses for all three administrators were five

(*most*). Both the Director and *Employment Administrator Two's* median responses for the

profiles' usefulness were four (*a lot*). Their corresponding interquartile ranges (three for

Director, and two for *Administrator Two*) reflected that there was a wider dispersion of

responses for the Director (from one to five) than for *Administrator Two* (from two to

five). These scores were also reflected by the Director's smaller mean (3.33) and larger

standard deviation (1.49). *Employment Administrator One's* median response, however,

was five with a small interquartile range of one, reflected by the mean response of 4.50, and the small standard deviation of .67.

To summarize, the administrators' quantitative results demonstrated that the YES tool's profile information was indeed useful to a career education curriculum. However, there were some drawbacks to the usefulness of the job search tool that need to be recognized in order to accommodate for those shortcomings.

Student results on tool effectiveness. The Effectiveness of the YES Tool Student Questionnaire, (Appendix H), involved a three-question, three-point Likert scale style instrument that was administered to each student after they completed making their job choices with the YES tool, and subsequently viewed their job profile. As was done with the Student Tool's Acceptability Questionnaire, (Appendix E), discussed in the question two sub section above, *nothing/not at all* was represented by a frowning face icon, *a little* was represented by a neutral face icon, and *a lot* was represented by a smiling face icon.

The first question asked about how much new information they had learned about job opportunities using the YES tool program. The second question asked about how much new information they had learned about themselves, and the third and last question asked how much more prepared they felt to look for a job opportunity after engaging with the YES program, and viewing the profile results.

Seven out of 12 students (58.3%) thought they had learned at least *a little* new about job opportunities, while the remaining five students (41.7%) felt that they had learned *a lot* new. Additionally, seven out of 12 students (58.3%) felt that they had

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learned *a lot* new about themselves, while the remaining five students (41.7%) found they

had at least learned *a little* new about themselves.

Lastly, seven out of 12 students (58.3%) found that the YES program had better

prepared them for job seeking *a lot*, three out of 12 (25%) found they were at least *a little*

more prepared, and two students (16.7%) found that this program did not increase their

preparedness at all. The following table shows that for the most part, the 12 students

found that using the YES program was a beneficial career education experience.

Table 15

Student Results on Tool Usefulness

Variable	Number	Minimum	Maximum	Median	IQR	Mean	SD
New About Jobs	12	2	3	2	1	2.42	.52
New About Self	12	2	3	3	1	2.58	.52
More Prepared	12	1	3	3	1	2.42	.79

The frequencies of student responses as to how they viewed the effectiveness of

the YES tool's use is further quantified by the data showed in the table above. Most of

the students found that they had gained at least a *little bit more* knowledge about jobs, as

the minimum of two shows, and some had found that they had gained *a lot more*

knowledge, as the maximum of three indicates. The median, where the most common

responses fell, is two (*a little*) which is also reflected by the mean of 2.42. The small

interquartile range of one, and the small standard deviation of .52, indicate that the

responses were tightly dispersed around the median of two (*a little*) or the mean of 2.42.

In terms of gaining more knowledge about themselves, however, even though the responses have the same minimum of two (*a little*) and maximum of 3 (*a lot*) as knowledge about jobs, in this instance, more students found they had discovered a lot more about themselves than the few that had garnered only a little more self-knowledge. This change is indicated by the median for new information about self being three (*a lot*) reflected, as well by a mean of 2.58. The small interquartile range of one, and the small standard deviation of .52 show that the responses were tightly clustered around the median of three and the mean of 2.58.

Lastly, the responses from the students regarding the question of whether or not they thought that they were now better prepared for job seeking after using the YES tool ranged from the minimum of one (*not at all*) to the maximum of three (*a lot*). The median for better preparedness was three indicating that less than 50% of the responses were below three (*a lot*). The interquartile Range of one was small, indicating that the responses were tightly clustered around the Median of three (*a lot*). Since the response ranged from one (*not at all*) to three *(a lot)*, the Mean of 2.42 for the responses about being more prepared was smaller than the Mean of 2.58 for more self-knowledge. Correspondingly, the standard deviation of .79 for being more prepared was also a bit larger than the standard deviation of .58 for more self-knowledge because of this wider range of responses.

To summarize, students' quantified responses, triangulated with their qualitative responses revealed that they had found the use of the YES job search tool to be a beneficial career education experience. Specifically, results indicated that the students

they found the experience to be most beneficial in learning more information about themselves, which could add to their overall preparedness for job seeking.

Summary

Social validity of the YES tool's goals. Per interview response, most of the parents, students, employment administrators, and the CTP's program director affirmed the social validity of the goal of the YES job search tool as a possible addition to this CTP's job preparation program, especially for those students who were new to the job exploration process. It was agreed that a *good* job match needs to involve consideration of an individual's interests, utilize their strengths, and require skills that either would not be hampered by their limitations, or appropriate modifications or accommodations could be provided in order to overcome individual deficits.

The opportunity for students to examine job opportunities that they might not have otherwise considered, and to receive a profile that indicated their particular job related strengths, as well as specify what skills might have to be trained or accommodated for, was seen as very beneficial. Both staff and parents expressed that such information might even lead to more individualized job practicums combined with more personalized training, modification, and adaptation exploration and practice. Participants expressed that such preparation and practice would better lay the groundwork for students for specific, realistic employment before and following graduation. Furthermore, participants indicated the benefit of early career exploration and preparation in that this approach lightens the burden on county Department of Rehabilitation Services resources to provide job placement assistance following

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graduation. Quantitative data from parents and staff triangulated the qualitative

responses that knowledge of job related interests, proclivities, and aptitudes were very

important. It provided additional data that even though staff and parents might only

perceive that they needed an average amount of more knowledge about job related

interests, proclivities and aptitudes, they projected that the use of the YES job search tool

to be extremely useful.

       Social validity of YES tool's procedure acceptability. Students, parents, staff,

and administrative staff found the YES job search tool to be fairly easy and enjoyable to

use, cost effective, and not overly burdensome to prepare to utilize. Students especially

enjoyed being able to watch the essential job skills being performed, and becoming

familiar with jobs they had either never heard of, or hadn't considered for themselves.

The staff felt that the 106-item YES aptitude protocol was fairly easy to complete

collaboratively, though the Director felt that it was logistically too time consuming for

staff to complete, and would rather have the parents complete it for their children. The

parents who completed the aptitude protocol said that that completion of the protocol was

not too time consuming, taking only 15 to 20 minutes, though some indicated that they

weren't sure whether to compare their children to the non-challenged population, or

individuals who were similarly challenged. All Administrative staff and parents thought

that the cost per students was extremely cost effective.

       Social validity of YES tool's result effectiveness. Parents, support staff,

administrative staff, and students all found the use of the YES job search tool and the job

profiles it produced to be beneficial and effective, but they also discovered some

drawbacks. Some of the benefits expressed included: (a) new job possibilities discovered, (b) person specific job related interests and aptitudes more clearly delineated, and (c) individuals became motivated for next steps. Some of the drawbacks included: (a) specific modifications, accommodations, or technical support possibilities were not listed that could correspond to the job-related weaknesses that were indicated; (b) some of the aptitude and job skill ratings did not appear to be valid; (c) there needed to be different types of jobs added to offerings; and (d) some students appeared to not be able to generalize themselves actually working in the job scenarios that they watched.

Parents and support staff found that they only learned an average amount about their students' job related interests and aptitudes, while the employment administrative staff found the data produced to be more useful. Most students found that they learned a good deal new about themselves and that the use of the YES tool enabled them to feel better prepared for employment exploration.

Parents and employment administrative staff expressed that the YES job search tool could be best used for first year students, it could be a good basis for class discussion, site exploration, and job specific modification, accommodation, and technical support investigation. The Director, one of the employment administrators, and one parent questioned the benefit of the tool's use for low level students, particularly if specific modifications, accommodations, and technical supports are not listed that correspond to a student's weaknesses in required job related aptitudes.

Chapter Five

This chapter first discusses interpretations of the results of this study that

examined the social validity of the use of the *Your Employment Selections* (YES) job

search tool based on the data perceptions of students, parents, and staff at a four-year

mixed hybrid Comprehensive Transition Program (CTP) for college students with

intellectual or developmental disabilities. The chapter will then proceed with a discussion

of the practical implications, limitations, and possible future research based upon the

interpretations of the results of this study.

First, I will describe the focus of this social validation study, the *Your*

Employment Selections (YES) job search tool followed by a brief reminder of the context

and key findings in the study. The procedure for using the YES job search tool is two-

fold. First, a 106-item aptitude protocol is completed for each student. Secondly,

students choose which job videos to watch and then select at least three job options that

they would be interested in exploring. Recall that the YES tool was not a regular part of

this CTP program curricula, but rather was introduced and tested by the researcher as a

potential addition to the program.

Here, the CTP staff collaborated on completing the YES aptitude protocols for

each student in a series of staff meetings. The staff reported that they found the protocol

reasonable to complete. Additionally, seven parents volunteered to complete the aptitude

protocol for their own children. Those seven parents said that the protocol completion took 15-to-20 minutes to complete, what they considered to be a reasonable amount of time, and that completing it was fairly easy.

Below are bullets of this study's key findings.

- The parents, students, and staff perceived that the YES tool career education goal of providing videos of multiple of job opportunities combined with a report of a student's aptitudes for specific jobs to be important. They indicated that individuals with intellectual or developmental disabilities need to choose from employment options that: (a) are familiar, (b) are interesting, (c) utilizes their strengths, and (d) their weaknesses either do not interfere with required aptitudes, or accommodations can be provided. The opportunity to see people preforming jobs that might be of interest that may draw on their strengths, including jobs they may not have considered before, was perceived by the participants as enhancing the employment exploration process. Participants found understanding what aspects of those new job possibilities would require extra training, modifications, or accommodations to be particularly beneficial in terms of improving students' ability to anticipate areas that may require self-advocacy.

- The parents, staff, and students found that procedures required to use the YES tool to be acceptable. The parents and the staff expressed that the cost of using the YES tool was extremely reasonable, and well worth the benefits that could enhance the students' job exploration and preparation process.

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- The parents, staff, and students found that the job profile results produced by the YES tool were effective for this CTP program participants, especially for first year students. Some jobs were chosen that had never been thought about before. Students, staff, and parents learned new information about the participating CTP students because of this process. The use of the YES job search tool motivated some parents, staff, and students to think about what they could do next with the job profile information. Some thought of having class discussions about certain jobs to further explore job possibilities. Others thought about visiting job sites. Still others thought about exploring the specifics about the additional training or modification that might be needed for particular students to access certain job opportunities.

YES Tool's Goals

The goal of the YES tool is to provide individuals with intellectual or developmental disabilities the opportunity to learn about and choose jobs they might be interested in by watching videos of people performing the tasks on site. A narrator describes the essential components of the job throughout each four-to-five-minute video of people performing the tasks on site at work. Once the students select, or narrow down, three job options, the YES tool software can be run to compare their specific 106 job-related aptitudes with the weighted corresponding skills required for their chosen jobs. The resulting job profile provides the user with information about what corresponding strengths she or he possesses for the best matched job of interest, and what areas require

additional training or accommodations for the student to be able to gain access to a

particular type of job.

 According to the perceptions of parents, students, and staff they expressed during

interviews, the YES tool goal was socially valid for this particular CTP for the following

reasons. Students looked forward to discovering new interests or new opportunities.

Their parents were interested in learning about the availability of realistic, paying jobs

that match their children's interests, and abilities (with appropriate support or training).

The CTP staff members thought that the YES tool might close the gap between

students who had extensive job exploration experiences and other forms of career

preparation during high school, and those with little or no previous career exposure. In

particular, Employment Administrators were excited about the prospect that they would

discover new possibilities of businesses in the community that they could partner with for

internships that better aligned with students' possible career paths. In addition, these

administrators looked forward to the possibility of developing new ideas for

accommodations and/or modifications at students' job practicum sites.

The participants' perceptions of the importance of the YES tool goals correspond

with the beginning elements of the first phase of the Self-Determined Career

Development Model (Wehmeyer et al., 2009). The first phase involves the individual

deciding specific job goals. To accomplish that, the self-determined job seeker must: (a)

discover what jobs he or she might be interested in; (b) find out what necessary aptitudes

that job requires; (c) compare those requirements with what aptitudes the job seeker

possesses; and (d) determine what modifications and/or accommodations the individual

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would need for there to be a successful job match. Here, in alignment with the Self-Determined Career Development Model (Wehmeyer, et al. 2009), the participants perceived that the use of the YES tool could possibly improve the job exploration process by offering the job seekers more choices to consider then they otherwise may have thought of, and providing a comparison of the seekers' unique strengths and weaknesses with what their jobs of interest would require. This information could lay a foundation for developing specific descriptions of what additional training, modifications, accommodations, or supports might be needed for specific individuals in particular jobs.

Recall that the researcher conducted a descriptive analysis of the quantitative data collected from the five-point Likert scale questionnaires; she recorded the medians as well as the means so that skewed data could be better represented. Since the median represents the middle number in a set of numbers ordered from smallest to highest, if the data is skewed and there are many of the same numbers that are either at the highest or lowest end, the middle number might actually be the highest or the lowest number.

In this case, the median response from both staff and parents for the need or usefulness of obtaining more knowledge of students' interests, proclivities, and aptitudes was three (*average need*) out of five (*very needed*). This indicates that the most common response from both staff and parents was that they only had an *average* need for more knowledge about those job-related areas. Moreover, there were individuals who perceived that there was no need for additional knowledge about students' job interests or proclivities, since the minimum recorded response for both of those was one (*none*). The

perceived need for more knowledge about job related aptitudes was slightly more, shown by the minimum response of two (*a little*).

Even though the most common responses of the staff and parents indicated that they thought that acquiring additional knowledge about students' interests, proclivities, and aptitudes to be useful only an *average* amount useful, their responses indicated that they still projected the usefulness of the YES tool's profiles to be *very useful*. The median response for projected usefulness of the profile was five (*very useful*), with the minimum being three (*average*). These data raise a question, "why do parents and staff perceive that the use of the YES tool *very useful* when they only think that the need to obtain an additional job related knowledge about the students to be of *average* importance instead of *very* important?"

When the qualitative and quantitative data were triangulated, a possible explanation was discovered for this discrepancy. Based upon some specifics that were shared through the interviews, the projected usefulness of the YES tool profiles appeared to be associated with the opportunity to see how a student's strength and weaknesses correspond to the skills that are deemed necessary for their chosen job interests. In other words, though there could be some benefit in learning more about students' interests, proclivities, and aptitudes, it was viewed that the opportunity to match these with the necessary skills for concrete job possibilities was very valuable. Some participants indicated that such profiles could show what areas of additional training, accommodations, or modifications would be necessary for a specific occupation.

Additionally, some indicated that the corresponding aptitude comparisons could better inform future realistic employment pursuits and explorations.

It can be said that parents, staff, and students agreed that the goal of the YES tool was socially valid for reasons that comprise some elements of the first phase of the best practice self-determined career development for individuals with disabilities as described by Wehmeyer et al., (2009). First, Wehmeyer et al. (2009) described that the self-determined job seeker must discover what jobs he or she might be interested in exploring. The participants in this study said that the opportunity to make choices about possible jobs, by watching videos of people performing the essential tasks at the job sites, was a good method of delineating possible employment opportunities. Second, Wehmeyer et al. (2009) stated that the job seeker must find out what necessary aptitudes that job requires. Here the participants recognized that the opportunity to watch individuals perform the necessary tasks at the actual job sites while a narrator also describes the job tasks would assist job seekers to better understand what the jobs required. Thirdly, a self-determined job seeker needs to compare the jobs of interest requirements with what the seeker possesses. In this situation, the parents and staff found that the YES tool goals of providing a unique list of an individual's strengths and weaknesses as they compare to what a job requires to be very important. Even for individuals who had already done quite a bit of exploration, the opportunity to obtain specific knowledge about required skills for jobs of interest as they correspond to a student's unique strengths and weaknesses, could provide data that was previously unknown. Participants confirmed that this knowledge could lay the foundation for the last element of the self-determined

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career development model: delineating realistic modification, accommodation, and technical supports tailored for specific students for the most suitable jobs.

YES Tool Procedures

Both the qualitative and quantitative responses from the students combined with observations of students using the YES job search tool indicated that the tool was not only fairly easy for all of them to use, but most found the experience to be interesting, as well as informative. Most of the students only needed a minimal amount of instruction at the onset, and explanation of some of the terms (e.g. paraeducator). All students chose categories of jobs that they were interested in (e.g. mechanical jobs, child care) and then read the list of options of job opportunities under that category. Some wanted to view as many jobs and categories as possible while others gravitated towards only a few.

Students were not required to watch the whole four minute videos, they chose to view in their entirety, however most did so. There were quite a few comments made by students that watching and hearing the narrator explain each job's essential skills was extremely beneficial. Students rated the suitability of each job possibility by clicking on the *thumb's up* or *thumb's down* icon before they went on to another video. As they were viewing the videos, a few students mentioned that a *maybe* option would have been really helpful.

The observer and the researcher looked for students' behaviors and expressions that indicated: (a) engagement (e.g watching intently, studying category lists, commenting); (b) enjoyment (e.g. smiling, nodding, laughing), (c) boredom (e.g. looking around, asking if they were done); (d) difficulty of use (e.g. asking for, accepting, or

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refusing help); and (e) frustration (e.g. verbalizing, facial expression, wanting to terminate).

It is appropriate to note that there were four students who were observed to remain engaged, interested and focused, but were not observed to show enjoyment by smiling, laughing, or commenting. This lack of outward expression was most likely because it was typical of their specific disability demographic, since they indicated their enjoyment through the questionnaire and interview afterwards.

Making informed choices is a necessary factor in self-determination, which is considered a best practice in disability intervention and has been linked through correlation to quality of life (Brown & Brown, 2009; Neely-Barnes, Marcenko, & Weber, 2008; Wehmeyer & Abrey, 2013; Wehmeyer, Fields, & Thoma, 2012). In order for a choice to freely made and informed, individuals must be able to: (a) select from job options which are familiar, (b) freely make a selection with their own initiative, and (c) clearly communicate that choice to others (Brown & Brown, 2009).

On the basis of the observations of the students using the YES job search tool, they clearly made their selections on their own initiative, and were able to communicate their choices by selecting the *thumb's up* icon for *like*, or the *thumb's down* icon for *dislike*, (even though a few of them would have preferred having a *maybe* category as well). The participants increased their familiarity with the job options because they could watch someone actually perform the work at the real job site. They could also familiarize themselves with the work conditions, such as noise and human interaction levels.

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It should be noted that the purpose of this job search tool is to help the participants narrow down their choices, so they can then go view places of work in the community and later arrange for trial placements. Trial job placements provide students with an opportunity to not only experience complexities of the work environments, but also have their performances evaluated (Wehman, 1992). Certainly, watching several minutes of individuals preforming the essential job skills in the actual work environments while the tasks are being explained by a narrator is preferable to looking at a picture or a line drawing, which have been found to have inconsistent results with people with intellectual disabilities (Ellerd, 2002; Morgan, Gerity, & Ellerd, 2000; Stock, Davies, Secor, & Wehmeyer, 2003; Thomas, 1996). However, since individuals with intellectual and/or developmental disabilities can have difficulties with being able to imagine themselves actually doing the work that is portrayed (Wehmeyer & Obremski, 2010) just watching a video cannot be considered as providing them with complete familiarity with the options that are presented and selected.

After a student participant finished choosing the job options that were of interest, it was necessary to narrow down their choices to two or three. Some students had chosen seven or eight job possibilities that they had been interested in learning more about. For the software to be able to match their choices as they corresponded to the weighted aptitudes for specific jobs, there could be no more than three choices analyzed at a time. What was discovered was when a student highlighted the three that were preferred, once the software was run, the other choices were not saved by the software system but lost. If the facilitator (researcher) had not hand-recorded these additional selections, the students

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would have had to go back and choose their job selections all over again to view and calculate the potential suitability of their other selected options. For future reference, therefore, it should be noted that YES job search tool student users either have to have the ability or be instructed to make note of all their choices separately from the YES tool, or have an assistant/facilitator take those notes for them.

YES tool 106-item aptitude protocol and software development. Morgan (2011) describes the process of generating the 106-item job matching aptitude assessment protocol. To develop the protocol, surveys of multiple occupations were presented to workers and job analysts with the dimension definitions (knowledge, skill, abilities), and asked to rate their importance for each specific job. Through multiple iterations of surveys to develop these three-dimensional descriptions for each job category and type, the Morgan group (2011) produced importance ratings for each of the jobs presented in the YES tool video collection.

The YES job search tool developers drew upon the survey to develop descriptions of the relative importance of particular knowledge, skills, or abilities for each job. The computer program then multiplies the importance rating for a particular job based on the job rater's rating of that seeker's skill levels (*good*, *fair*, or *poor*) for each of the 106 dimensions. The result is a profile that indicates a score on the relative match between the job seeker's skill levels and the job requirements for the chosen jobs. It also lists the job seeker's strengths and weaknesses that can be used for further training or accommodation exploration.

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YES tool 106-item aptitude protocol: Need for definition clarification. The staff members who completed the 106-item aptitude protocol for each of the 12 student participants during staff meetings found their efforts and results to be within acceptable limits. However, a need for more precise rating definitions were observed. Each aptitude item had a description of an example of what could be rated as *good* for this area. For example, "Mathematic Skills" has the definition, "using mathematic skills to solve problems." There was no corresponding definition for what would be considered *fair* or *poor* aptitudes in each area. Therefore, there was much discussion during the meetings about how to rate a student's particular aptitude as *good*, *fair*, or *poor* as compared with the typical non-challenged students, as opposed to the similarly limited population.

It is interesting to note that there was a large range of inter-rater reliability for skills (0.71 to 0.93) and for knowledge (0.37 to 0.95) found among the responses to the surveys that produced the weighted job aptitude descriptions. It is notable that these aptitude descriptions were not developed with impaired populations in mind, but that nonetheless, there existed a wide range of expectations among those surveyed for what knowledge, skills, and abilities are involved in each job type. Even though these rating scores are used for screening processes purposes only, it would be beneficial to improving the utility and reliability of the YES aptitude protocol to develop scoring rubrics with explanations/examples of the *fair* and *poor* rating categories that parallel the good rating category descriptions. Providing clear definitions of the rating categories would do much in order to reduce some of the influence of subjective guesswork. Even

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that for screening processes, it is beneficial to eliminate as much of the subjective rating discrepancies as possible.

It should be noted that even though the staff at this particular site found completing the 106-item protocols to be acceptable and therefore socially valid, it was decided that if this tool would be used for an incoming freshman (first-year) class, it would be preferable to have them completed by families. This would better conserve the staff time availability, since they are all students.

Seven out of the twelve parents volunteered to complete the 106-item aptitude protocol for their children. Several of these parents stated that they were unsure how to choose between *good*, *fair*, or *poor* for some of the attributes, but they said that they did the best they could. This perception mirrored the similar lack of clarity that the staff experienced as to whom they ought to be comparing their students with when completing the protocol, as mentioned above.,

The researcher did record whether or not parents reported that they thought that completing the protocol was too time consuming or difficult to complete. The parents indicated that it only took about 20 minutes to complete the protocol, which is the amount of time that Morgan (2011) had said it should take the stakeholders to complete. The parents also indicated that they felt this amount of time expenditure was reasonable. Some of the parents stated that they were unsure how to choose between *good*, *fair*, or *poor*, for some of the attributes, but they did the best they could. This perception mirrored the similar lack of clarity that the staff had undergone, as mentioned above.

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Since all twelve sets of parents did not volunteer, the researcher did not submit the seven inter-rate agreement data between the staff and parental ratings for the same student into the final study results. However, for probing purposes, the researcher did compute the inter-rater agreement between the protocol ratings the parents completed for their child and the one the staff had completed for that same student. The researcher calculated the inter-rater agreement between the seven students' 106 item aptitude protocol completed by the parents and the corresponding seven for the same students completed collaboratively by the staff. The mean agreement was only 51%, which is greater than the 33.3% expected by chance, but is far below the accepted guideline of consensus estimates which ideally should be at 80% or more (Stemler, 2004). For example, a number of parents tended to consistently rate their child lower than the staff members, for instance scoring *poor* on a dimension which the staff had rated *fair*.

Moreover, the mean extreme disagreement where one rater (parent or staff) rated a student's aptitude as *good*, while the other rater (parent or staff) rated the same aptitude as *poor* was 15.71%. The mean extreme disagreements of ratings occurred frequently in the case of items related to rating the student's physical attributes such as depth perception or peripheral vision. Here again, parents rated their child as *poo*r in this attribute area while staff rated the student *good*.

In comparison, Morgan's 2011 study, that involved five pairs of job coaches & teacher raters who completed the protocols for 21 students had a much higher mean agreement of 71.75%. It would be understandable that parents and staff might have a greater range of disagreement, especially in those areas such as specific physical

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attributes that staff might not be as fully aware of as parents. Also, it would also be understandable that student staff members might have a greater tendency to rate student participants through the lens of the disability demographic, and rate them higher than parents would. However, even though Morgan's inter-rater agreement percentage fell close to the acceptable range, Morgan indicated that the results, "speak to the need for more specific definitions of dimensions and clarification of expectations of raters." (Morgan, 2011, p. 32). Likewise, since both parents and staff expressed confusion when rating student aptitudes, this study demonstrated that more precise clarification is necessary to improve the effectiveness of this career education tool.

Summary: YES tool procedure socially validated acceptable. All staff and parents considered the cost of the use of the YES job search tool per student was extremely reasonable. The only reviewed tool which used both videos of job options and job related aptitude evaluations, *The Pictorial Inventory of Careers,* required both training and licensing purchases for two tools which were extremely costly. In comparison, the YES job search tool could easily be used with minimal cost and training. In summation, it can be concluded that with some refinement of the weighted job aptitude requirement descriptions, the time and energy expenditure for preparation, ease of use, and cost expenditure of the use of the YES job search program in this four-year CTP program, all fell well within acceptable limits, and therefore were socially validated.

Effectiveness of the YES Tool's Results

Benefits of YES tool use. The qualitative results indicated that there were numerous benefits seen from the initial use of the YES job search tool, and that this

career education experience generated a number of possible next steps for students, parents, and staff alike. Administrative staff and parents were pleased to discover additional job possibilities and new proclivities, be reminded of interest areas, and have job specific strengths and weaknesses indicated for individual students.

One parent was pleased to learn that her daughter really wanted to work outside. Even though the parent communicated that she thought that some of the choices she made watching the video were not realistic, the YES tool experience gave her the idea of suggesting to her daughter that she look into becoming a historical site tour guide. This parent thought that this job option would draw upon her daughter's memorization skills, one of her daughter's key strengths.

Similarly, the Employment administrators were excited to see some options chosen by students that they had never thought of for those students before, such as working in a nursery, or house painting. The Director was pleased to see a student's choice of restaurant cook. Not only was this idea something the student had never thought about before, but she saw that the student had all but one of the required aptitudes. The Director thought that additional training to address the student's weakness, skills related to working with money, could be easily trained provided.

Drawbacks to YES tool effectiveness. There were also some drawbacks to the effectiveness of the YES tool indicated by parents and Administrative Staff. For example, some parents questioned the accuracy of the job specific skill aptitude rating. One parent was surprised to find that her daughter was rated as having almost all the skills for being a dairy farmer. In this situation, members of the student's extended

family run a dairy farm. Based on this experience, the parent said that she believed that

her daughter does not have the adequate physical strength to do be a dairy farmer.

The Employment Administrators were troubled that the students who were in the

lowest cognitive ability level, since they had greater deficits, had so many weaknesses

listed. This observation called into question the sensitivity of the aptitude protocol to

accurately rate the suitability of jobs where accommodations are possible to provide. As

an example, one student's profile indicated that she had almost no strengths for working

with children, when she has been very successful in her trial jobs working in child care.

Additionally, parents said that they thought their children were making choices

based on what looked interesting, but that the students did not really understand what the

job really would demand of them. For instance, one parent laughed that her son chose to

explore what it would be like to be a dairy farmer, since he was even afraid of puppies.

Several parents were disappointed that there was a lack of specific modification,

accommodation, and/or technical support ideas to correspond with an individual's job

related weaknesses. The Director stated that she would have preferred if job categories

were separated by skill requirement categories, especially so that the more severely

challenged students could choose more realistic options that captured their interests. The

Director also would have preferred if there were more categories for non-rural

individuals.

These drawbacks could explain why neither the parents nor the staff perceived

that the tool's first use produced the high level of utility that they had anticipated, as

shown by the questionnaire results. When both parents and the two administrative

employment staff members completed the YES Tool Goal Questionnaire before the student profiles were distributed, their responses indicated that they anticipated that the tool's results could be extremely useful. The median response from both parents and administrative staff was five, *extremely useful*. When the parents completed the YES Tool's Results' Effectiveness Questionnaire after they read the job profiles, the median response rating how useful the results were regarding the information garnered about their child's aptitudes and interests of the five-point scale was only three, (*average usefulness).*

Similarly, the Director and the two employment administrators were given the YES Tool's Results' Effectiveness Questionnaire to complete for each of the twelve students based on the individual students' job profiles. This questionnaire involved a Likert scale five-point question that asked them to rate the usefulness of a particular student's job profile. When the median was calculated based on the twelve responses from the Director's ratings of how useful she perceived each student's profile to be, the result was a median of three, *average usefulness*. The range of medians for the Director's ratings of the usefulness of each of the twelve students' job profiles was broad, with a minimum rating of one (*none*) to the maximum rating of five (*extremely useful*).

*Employment Administrator Two'*s median of the ratings of usefulness of all twelve students job profiles was a bit higher at a four (*very useful*). The range of medians for *Employment Administrator Two*'s ratings of the usefulness of the job profiles of each of the twelve students was a little narrower than the Director's, with a minimum of two (*a little*) to a maximum of five (*extremely useful*). While *Employment Administrator One*'s

median was five (*extremely useful*), with a minimum of three (*average*) to a maximum of five (*extremely useful*).

The Employment Instructors and Job Support staff were not asked to predict the usefulness of the YES tool. Rather, after viewing the students' job profiles this group was asked if they found the results to be useful because they added to their knowledge about the students. The Employment Instructors and Job Support staff found the results to fall in the *average* range with a median of three for usefulness of new knowledge regarding both interests and aptitudes.

Interpretation of data. A possible explanation for the discrepancy of the Director's and parents' projected usefulness rating (*very useful*) of the Yes tool, and their rating of the actual usefulness (*average*) of the tool could be their focus on the drawbacks and missing pieces in the YES tool that they expressed during the interview conversations on the usefulness of the curriculum. Each of the missing components described as key to improving the utility of the YES tool are also important elements discovered in research on self-determined career development for individuals with disabilities, and especially those with intellectual and developmental challenges (e.g. Brown & Brown, 2009).

For example, Brown and Brown (2009) indicated that familiarity with possible job options is especially important for those who may have limited experience with choices, and have difficulty imagining themselves in different environments or doing tasks that are new. Parents in this study shared that they viewed some of the unrealistic job choices their children made as confirming that some students may not be able to

make informed choices based solely on the results of using the YES tool without additional guided discussion and site exploration.

Again, an essential component of self-determined career development for this demographic is for individuals to compare what aptitudes a job of interest requires and compare that to their own strengths and limitations (Wehmeyer, et al., 2009). As was described in the description of the development of the job requirement O*NET data used by the YES software, a job's required skills and aptitudes still can have inter-rater disagreement (Morgan, 2011). Furthermore, rating an individual's strengths and weaknesses can be influenced by rater's experience observing the aptitudes within a job site context, or differing interpretations of aptitude definitions (Morgan, 2008; Morgan, 2011). However, aiding students in developing an approximation foundation of self-knowledge is the main purpose of the career education YES tool. Engagement with the tool is meant to narrow down the choices of options before any community trials begin and to supplement the career education program with reflective tools designed to assist the development of informed choices of job to explore, not replace site visits, practicums and other reflective tools such as class discussions.

Lastly, as Wehmeyer et al. (2009) recommended, the exploration of appropriate accommodations for an individual is necessary for a suitable job match. The purpose of the YES tool is to approximate not only what affordances students may have for a position but also what limitations might have to be accommodated for or where additional training might be needed. It is clear, that the parents and the Director recognized that such investigative processes (e.g. discussion, site visits, and exploring

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specific support options) need to be involved along with the use of career education such as the YES tool.

The students' quantitative responses based on a three-point Likert scale demonstrated that the students themselves perceived that they had greatly benefited from the use of the YES tool. They not only learned about new jobs, (median of three out of three) and felt more prepared to look for jobs (median of three out of three), but most importantly, students reported that they learned something new about themselves (median of three out of three).

These new discoveries not only motivated eight out of twelve students to delineate some next steps to explore specific job possibilities, but four out of twelve parents were also given new ideas for the types of career education opportunities they could coordinate for their children. The elements of discovering more about oneself, one's particular environment, and then choosing to act in order to obtain valued outcomes are indicative of looking at the process of self-determination from the vantage point of the ecological model (Wehmeyer &Abrey, 2013). Discovering job possible job goals, and then formulating a plan on how to achieve them, is an essential component of the best practice of self-determination as a career model (Wehmeyer et al., 2009).

Enhancing YES Tool's Aptitude Matching Components

Wehman (1992) and Ellerd (2002) indicated that the ideal way for an individual with disabilities to evaluate job preferences is through community-based trial job placements. Such job placements can be very time consuming and expensive if they can be set up at all (Wehman, 1992; Wehman, et al., 1988). It is for these reasons that tools

like the YES tool are needed to screen and narrow down the options and optimize job placements and ensure that time and other resources are not wasted on ill-suited placements.

This study reinforced earlier research that found career education tools that employ the use of videos, require very little or no reading to consume, and can indicate the degree of match between an individual's abilities with a job's required skills are useful job screening and selection tools for those with intellectual disabilities (Hanley-Maxwell & Izzo, 2011; Morgan, 2008; Stock et al., 2003). Indeed, parents in this study recognized that job search tools such as the YES tools that can rate an individual's aptitudes with a particular job skill requirements can help narrow down the options for site visits (Hanley-Maxwell & Izzo, 2011; Morgan, 2008; Neubert, 2012), however they also emphasized that class discussions, site visits, and internships are excellent means of enhancing individuals' familiarity with various job descriptions beyond watching videos with explanations before trial job placements are arranged.

The suggestion of class discussions and site visits could not only increase students' familiarity, but also better delineate specific aptitude rating matches. Certainly, job search tools which can rate an individual's aptitudes with a particular job's skill requirements can help narrow down the options for site visits (Hanley-Maxwell & Izzo, 2011; Morgan, 2008; Neubert, 2012). However, as stated previously, job specific skill requirements as well stakeholders' ratings of an individual's aptitudes have been shown to lack objective precision (Morgan, 2011). Discussions in class and even presentations by employees can perhaps give more concrete, in depth, information about what a

particular job entails. Furthermore, parent participants in this study suggested possible

site visits so the students could better imagine themselves doing particular jobs. The

Employment Administrators thought that some new office campus internships or summer

trial jobs could be arranged, so that students could experience performing some of the

additional jobs of interest and decide the suitability of the job based on practical

experience. Both groups claimed that site visits, that may involve job shadowing, would

give the individual a more complex understanding of job aptitude requirements. With

this additional information, stakeholders and the job seekers could more closely evaluate

and rate the particular skills that the job seeker would need for that occupation.

Systematically documenting these observations from a user group perspective could build

upon the foundation created by tools such as the YES program to describe what

additional modifications, accommodations or supports can be feasibly provided to make

particular jobs accessible to individuals with cognitive limitations.

Exploring what modification, accommodation, and/or technical supports can be

provided so an individual's aptitudes can match with a job's requirements is an essential

key component in the Self-Determined Job Choice model (Wehmeyer et al., 2009). The

particular Comprehensive Transition Program that was the context of this study is part of

a university that grants advanced degrees in both Special Education and Assisted

Technology. Given the availability of these resources, the suggestion a parent made

about utilizing graduate students involved in these programs to develop specific

modification, accommodation and technological support possibilities that could be then

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listed alongside a student's job profile weaknesses is certainly realistic. In fact, this could provide a further development for the YES tool.

However, as stated previously, job specific skill requirements as well as stakeholders' ratings of an individual's aptitudes have been shown to lack objective precision (Morgan, 2011). Indeed, this study supports research that has demonstrated that discussions in class and even presentations by employees who work in a particular job of interest can provide more concrete, in depth information about what a particular job entails then the job profiles can provide.

YES Tool's Effectiveness Result Summary

According to the participants' perceptions, the use of the YES job search tool produced career education learning outcomes that are certainly useful enough to be considered socially valid for this Comprehensive Transition Program. New job possibilities were discovered that had never been considered before. Some of the students' choices helped broaden the parents' and the CTP staffs' understanding of students' proclivities. Indications of students' job specific strengths and weaknesses were helpful in illuminating what additional training or accommodations would be appropriate to explore.

Parents, the Director, and the Employment Administrators shared that they considered this tool to be especially useful for the middle and high cognitive level students, who experience less limitations as compared to students with low cognitive abilities. The middle and high cognitive level students' job specific strength ratings were often listed as making a significant contribution to a good job match, and in many cases,

their job-specific weaknesses could reasonably be overcome with some additional training, accommodations, or support.

For the low-level students who have more severe limitations, this study indicated that it would be best to explore the technical and modification support and rate them while using those supports, or considering those accommodations. If job offerings could be categorized that had the lowest requirement of aptitude or skills, this might be helpful for these students as well.

Parents, the Director, and the Employment Administrators agreed that the YES tool would be especially socially valid for the beginning first year students who had not as had as many opportunities to explore job interests prior to their involvement in the program. The negative elements of the YES tool, or missing components that were discovered, could potentially be addressed by class discussions, site visits, and graduate student studies' contributions, as some parents and Administrative staff suggested. It should be noted, that even the separation of jobs into aptitude categories suitable for the lower level students could be accomplished by future research studies performed by graduate students.

Practical Applications of Findings

When the researcher first contacted the designer of the YES job search tool, Dr. Bob Morgan, Ph.D., Research Associate Professor, Department of Special Education and Rehabilitation, Utah State University, he informed her that this would be the first time that the tool would be studied at a four-year Postsecondary Education program. Morgan was particularly interested in whether the choice of the 120 job options, as well as the

tool itself, would be suitable for this population. This study was not designed so that its results could be generalized, even to similar populations at other Postsecondary Education programs. It does, however, provide some vivid snapshots of the benefits of the program to this particular population of college students and opportunities for improvements that the participants from this particular Comprehensive Transition Program discovered during the students' one time use of this particular job search tool. Since the YES job search tool widely used in career education programs, some of the discoveries from this study could be useful to practitioners who recognize lessons learned that may apply to their own context. The following table depicts key practical findings of this study.

Table 16

Practical Recommendations for YES Tool Based on Study

Practical Needs	Recommendations
Access to YES tool's use	At the very minimum, students should have access to use the YES tool for one semester, once per week, or at minimum bi-weekly. Arrangements could also be made for parents to have access, to better inform Person Centered Planning meetings.
When the YES Tool be first used	First semester Freshman year would be the best time for students to be introduced to the YES tool, before a great deal of exploration and trial job placements have taken place. This also can build provide an opportunity for discovering and practicing needed supports, modifications, or accommodations, or plan for extra training.
Recommendations for users per cognitive level functioning	**Medium – High Groupings**: The YES tool is certainly recommended for students who were in the Medium to High groupings, based on cognitive and other limitations, per this study's findings. Their profiles indicated matches which were not dominated with job skill weaknesses which would need to be compensated for. **Low Grouping**: For the two students in the Low grouping, the domination of aptitude weaknesses compared to strengths was initially discouraging. Care should be taken to complete the 106-item aptitude protocol based on Assisted Technology support, or further categorize choices based on aptitude requirements.
Modification, Support, Accommodation, and Training List	It is recommended that a list of modification, accommodation, support, and job specific skill trainings be designed which can compensate for aptitude deficits. These can be practiced at intern and trial job sites as well. Care should be taken to discover what supports would be acceptable with potential employers.
Enhancement Ideas	Class discussions, speakers who represent and can share about their jobs, and job site visits can enhance students understanding about the particulars about unfamiliar jobs.

One of the benefits of the YES tool, as expressed by some of the students was that watching people performing jobs on site while the essential skills are being described by a narrator gave them an opportunity to, as one student shared, "discover what kind of person they are." By making choices about what interested them, and evaluating whether they thought they could perform the tasks being shown, students reported that they grew in self-awareness.

Some parents also found that they were reminded of, or became aware of, their child's proclivities, and interests. Parents realized that even though a student's specific job of choice might not be realistic, a new type of employment area was discovered that may have roles that are suitable matches for their child.

This self-discovery process was also perceived to be beneficial for learners from the perspective of the Director and the Employment Administrators, since they were given new ideas about training and internship possibilities for some students. Other Postsecondary Education programs might also find that job exploration tools that use a similar video and matching aptitude protocol format could enhance their job exploration process. It would be prudent to keep in mind, however, that especially for this demographic, discussions or even visits might be necessary for unfamiliar job selections. The jobs may look fascinating to watch on a video, but being present at the site could change an individual's perception completely.

A job search tool with numerous categories and options are great foundations for small group or class discussions. If a program is using a job exploration tool that involves numerous job categories and as many options as the YES tool, it would be

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beneficial for the teacher/facilitator to become very familiar with the categories and all the options. Furthermore, it would be valuable for the facilitator to examine which options that might not be realistically available for most students because of the environments in which they live and to make a list of those jobs that are more viable for low, middle and high level students with intellectual and developmental limitations. This list of possibilities can then be highlighted as some of the choices that will be the foundation for viewing and discussion in the early phase of their career education program experiences.

This is not to say that this researcher recommends that students not be free to view all 120 of the job possibilities described on the YES videos after their initial career education exploration experiences. But to start out, it is recommended that there be facilitated class discussions about what types of jobs might be available where the students live and explore those possibilities with the job search tool first before expanding to consider other possibilities.

Job categories can be discussed one- by- one in order to make better informed decisions about which possibilities to explore and help in reflecting on the suitability of each job placement on an iterative basis. For example, through class discussions, students can explore what it is like to work outside verses inside, by oneself or with a team in various work settings. Students can be given homework assignments to view and make some kind presentation about a different job option right before it is viewed by others to help orient the group and sensitize them to noticing particular features involved in different types of jobs.

If any of the students or staff know people who are employed in any of the attractive job options, they might be invited to class to share what the job is like from their perspective, whether in person, by video, or via Skype. All these options only increase the students' familiarity with the choices they can make.

Parents and Administrative stakeholders in this study found that is especially important to not only match students' strengths and interests to make suitable job placements, but to discover what limitations need to be overcome for a job's necessary aptitude requirements. This is also one of the key components of the Self-Determined Job Choice model (Wehmeyer et al., 2009). If a career program is not using the YES job search tool, it would be of benefit to find other similar tools or means to obtain an approximation of required skills/aptitudes for jobs of interests. This researcher also recommends that career education programs need to find and employ some measure for rating individuals' job related aptitudes, so apt comparisons can be made.

Those same stakeholders found that it is extremely important to use available resources to explore what modifications, accommodations, technical supports, or additional training would be appropriate to compensate for students' limitations for specific jobs. This exploration is the final key component described in Phase I of the Self-Determined Job Choice model (Wehmeyer et al., 2009). This would need to be accomplished whether the YES job search tool was used or not. As mentioned above, the Postsecondary Education program involved in this study has access to graduate students specializing in Assistive Technology or Special Education, who could do internships for this very purpose. Other programs might have alternative resources.

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For the Comprehensive Transition Program involved in this study, some of the parent and Administrative suggestions could be practically applied in this or other settings. As the first term freshman class proceeds and students begin to make job choices to explore and receive job profiles, staff can support students by indicating which on campus jobs practice some of the skills that could be utilized by some of their job choices. Time should be taken to discuss hobby or volunteer options and realistic employment options. If a student is set on a possible job that is not realistic, collaborative exploration can help the student discover how different positions within a job category of interest might involve some of those interests - or that those interests can be incorporated into non- paid activities.

If new interests surface that could be turned into new on or off campus practicums, the Employment Administrators can proceed to make such arrangements. As the students proceed through the years, the Person-Centered meetings, choices of practicums, and summer employment trials can become more focused on permanent and realistic specific employment options that may be prepare and establish a student in a particular job before graduation.

All modifications, accommodations, and assistive technological supports should be fine-tuned and practiced in practicums and other job sites throughout the years. For those students in the lower levels with less cognitive abilities, or more complex limitations, rating their aptitudes with the YES tool's 106-item protocol should be completed using technological supports, and with modifications/accommodations in mind. Experimentation could also be done working with employers to explore the

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possibilities of carving out certain sections of available jobs which could even be accomplished in teams.

In summary, the ideas described here are by no means intended to be all exhaustive, nor necessarily generalizable to other programs. However, the application ideas might provide some additional insight for other practitioners. Following is a description of some of the limitations to this study.

Limitations

There were several limitations involved in this study. First, the confusion with how to properly rate the students on the 106-item protocol needs to be reduced, if not eliminated. Even though there is certainly a subjective element to the rating system, without descriptions of what elements should be rated as *fair* and *poor* for each skill, instead of just descriptions of elements to be rated as *good*, it is difficult to reliably rate each students' aptitudes. Currently there is too much room for what is tantamount to subjective guessing. With this in mind, additional time needs to be given to properly train whomever the aptitude protocol.

Since it was difficult to schedule conversations with parents, the collection of data related to participants' perspectives regarding the goal of the YES tool had to be conducted during the same session as the data collection regarding the participants' perceptions related to the effectiveness of the YES tool results. In addition, the parents were instructed in an electronic-mail message not to look at their child's attached job profile results until after they had completed the Likert scale questions regarding the goals of the YES tool. As it happened, some parents reported that they did look at profile

results first, and then tried to not let those results bias their goal answers, but looking at the job profiles first most likely that contaminated some of the responses.

Lastly, this study only collected data about the students' use of the YES job search tool for one session. To be able to collect social validity data on the tool the way it was intended to be used, it is necessary to follow the student participants through multiple sessions over an extended period of time. It would be preferable to follow and report upon the student experiences and perceptions through to permanent employment that involves any modifications, accommodations, and/or assistive technology supports suitable to compensate for any limitations related to required job skills for particular positions. Data could then be collected regarding how useful the YES job search tool was for each student in identifying and procuring suitable and satisfying employment.

Future Research

One of the limitations of the YES job search tool involved the choices being based solely upon students' interests before the aptitude challenges were considered. This fact was especially challenging for the lower level students who had more severe cognitive or developmental challenges. It would be of great benefit if the job options could also be sub-categorized according to job related aptitude requirements.

As mentioned earlier, research that provides details on modifications, accommodations, and assistive technologies available to make particular positions accessible for students also would provide the individuals and their supporters with necessary self-advocacy tools. Therefore, a very worthwhile study would be to coordinate with the YES job tool staff in order to compile a specific list of modifications,

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accommodations, assistive technology supports that would correspond with the various weaknesses that are indicated with specific jobs' required skills. As one parent indicated particularly, just listing weaknesses without the corresponding possible supports can give a false picture about the individual. It also can provide the student with necessary self-advocacy tools.

Finally, it would be extremely beneficial to conduct a longitudinal study following students as they use the YES tool to explore job possibilities, participate in trial employments, and experiment with individualized job-specific modifications, accommodations, and technological supports. This study could continue through the school years up to permanent, successful and satisfying employment. Such a study would not only contribute to the field of career preparation for this target population, but could potentially inform practical improvement to the YES job search tool itself.

Dissertation Summary

This study was set on the campus of a mixed/hybrid four-year Comprehensive Transition Program that serves students with intellectual and/or developmental disabilities from various regions of the United States. This piece of research described the social validity of the YES job search tool for use in this program's career preparation program by eliciting and examining the perceptions of participating students, parents and staff regarding: (a) the social significance of the YES tool's goals; (b) the social appropriateness of the YES tool's procedures; and (c) the social importance of the YES tool's effects.

The study employed the use of both quantitative and qualitative measures to collect data from the participants. The quantitative data included Likert scale style questionnaires, short yes-or-no questions, and frequencies of satisfaction/dissatisfaction analysis criteria while students used the YES tool. The qualitative data included semi-structured interviews.

The results of this study indicate that parents, staff, and students found that: (a) the goals of the YES job search tool were socially significant; (b) the YES tool procedures were acceptable, if families rather than staff completed the 106-item aptitude protocol for each student; and (c) the effects of using the YES tool were socially important, especially if used for first-year students in the middle or high cognitive levels who have less cognitive or developmental limitations.

The ability of this population to obtain successful job matches is particularly important since this demographic is currently having so much more difficulty finding employment than other populations in this country. Therefore, these findings are promising in that they demonstrate that the YES tool, and similar career education tools, can assist this population in their search for suitable and realistic employment. Users can discover job possibilities that can match their interests, and strengths, as well as discover what specific areas of limitations would need additional supports to access those job options.

There were some drawbacks found to this tool, such as the need to reach beyond the information provided by the YES program to explore specific modifications, accommodations, and assistive technological supports that could compensate for job

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required aptitude weaknesses for specific jobs. However, increased sensitivity to potential means to make jobs more accessible to intellectually and developmentally limited students could lead to new approaches developed by the staff at this particular Comprehensive Training Program, if they choose. There were certainly limitations to the study, however future research could make up for some of those. Research on enhancing the results of the tool by discovering and adding specific supports for job related weaknesses, and a longitudinal study following students through the years into the workplace could certainly be beneficial.

As was previously stated, the majority of individuals with intellectual or developmental disabilities face numerous barriers that prevent them from obtaining full time employment that matches their interests and aptitudes. Without successful employment, a basic component of human function, these individuals lose out many benefits, not the least of which are enhancement of self-worth and increased financial and personal control over life choices (West, Wehman, & Wehman, 2005). Society at large is poorer without these members being able to share their unique gifts (Grigal & Dwyre, 2010; Hart & Grigal, 2010a). Though preparation, training, and accommodation provision to secure suitable employment is more extensive than for individuals without disabilities, there is comparatively little research being pursued pertaining to career development interventions for individuals with disabilities (Niles & Harris-Bowlsbey, 2009).

In order to narrow down the possible community job trial options that can be costly to finance and staff (Wehman, Moon, Everson, Wood, & Barcus, 1988), career

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exploration tools for the target population of those with intellectual and developmental disabilities are being designed (Morgan, Gerity, & Ellerd, 2000). Previous research indicates that self-determined career exploration for this population can best be assisted with tools that utilize videos of job options, require less than a fourth-grade reading level, and compare the user's job related aptitudes with preferred jobs' required skills (Hanley-Maxwell & Izzo, 2011; Morgan, 2008; Morgan, Gerity, & Ellerd, 2000; Stock, Davies, Secor, & Wehmeyer, 2003). The YES tool which was used for this study, was designed utilizing all of these components (Morgan, 2008).

The results of this study determined that staff, students, and parents of a Postsecondary Education program designed specifically to prepare individuals with intellectual and developmental disabilities to lead productive lives (Grigal & Dwyre, 2010; Hart & Grigal, 2010a) found the YES tool to contribute positive benefits to the career preparation curricula at this program. These findings are valuable additions to the research being conducted on self-determined career development interventions that assist this population's successful employment. The more positive additions to this field, the more individuals with these disabilities will be aided in their quest to maximize their productivity which can only enrich society at large.

Appendix A

HSRB Approval Notification Protocol #7937
HSRB [hsrb@███████]

To:
 Kim M Michaud [kmichaud████████]
Cc:
 Margo A Mastropieri [mmastrop████████]
Tuesday, February 14, 2012 2:04 PM

Dear Kim,

The HSRB has approved your protocol #7937, entitled "Does the YES Program Enhance Job Matching for a Population and Intellectual or Developmental Disabilities? A Social Validity Study." Copies of the consent/assent forms and recruitment materials approved for use in conducting this research will be included with the approval letter that is being sent to you today. You should not begin your data collection before receiving these documents. The consent form and recruitment materials have been stamped by the Human Subjects Review Board and are the ones that should be used to conduct your research. A copy will be sent to Dr. Mastropieri as well.

The anniversary date of this study is 2/8/13. You may not collect data beyond that date without ████ HSRB approval. Prior to that date, the GMU Office of Research Subject Protections will send a letter to you regarding continuing review procedures.

Please note that any modifications to your research (including the protocol, consent, advertisements, instruments, funding, etc.) must be submitted to the Office of Research Subject Protections for review and approval prior to implementation.

Please contact me if you have any questions.

Thank you,
Bess

--
Bess Dieffenbach
Office of Research Subject Protections

Likert Scale Questionnaire for Employment Staff and Family on Goal Importance

Pick one a number from 1 to 5 that best corresponds, with 1 = least; 5 = most

1. How important do you feel it is to be made aware of students' (child's) interests in making a successful job placement? (1 = little importance; 5 = very important)

    1   2   3   4   5

2. Reflecting upon your current resources, how much MORE information would you like to have about students' (child's) interests when making job placements? (1 = very little; 5 = a great deal)

    1   2   3   4   5

3. How important do you feel it is to be aware of students' (child's) proclivities (e.g. creative/analytical, social/independent) in making a successful job placement? (1 = little importance; 5 = very important)

    1   2   3   4   5

4. Reflecting upon your current resources, (or child's explorations/evaluations) how much MORE information would you like to have about students'(child's) proclivities when making job placements? (1 = very little; 5= a great deal)

    1   2   3   4   5

5. How important is it to be aware of students' (child's) strength and weakness

   aptitudes in making a job placement? (1= little importance; 5 = very important)

              1   2   3   4   5

6. Reflecting upon your current resources, how much MORE information would

   you like to have about students'(child's) strength and weakness aptitudes when

   making a job placement?

       (1 = very little; 5 = a great deal)

              1   2   3   4   5

7. Overall, how helpful to you would be a profile with three job possibilities based

   on students' job choices matched with their aptitudes and interests to the job

   matching process?

       (1 = very little; 5 = very much)

              1   2   3   4   5

Appendix B

Semi-Structured Interview with Employment Staff on Goal Importance

1. Indicate the steps involved as you proceed to place a student into job opportunities

2. What sources of information about the students do you utilize in the job matching process?

3. Do you use any formal interest or aptitude tools, or web resources, and if so, please describe them?

4. Think of a student who was successfully placed. Describe the elements that you believe contributed to this successful matching.

5. Think of a student who was challenging to place. Describe the elements that you believe contributed to these challenges.

6. How do you think that job-match profiles based on student's interests and aptitudes would help you in this process, if at all?

7. What kind of additional information about students' interest and aptitudes would you feel would be helpful, if any?

8. Please indicate and record what additional information you would like to see produced by the YES program profiles. You will use this to compare with the results produced by the YES program in order to evaluate its utility.

9. Please record three job possibilities for each student that will be using the YES program tool. You will use this to see if the use of the YES program tool was able to produce options that hadn't already been considered.

Appendix C

Student Likert Scale Questionnaire and Semi-structured Interview for Students on

Goal Importance

Pick the one that best describes how you feel:

 = Unhappy with or No   = Just OK /   = Happy with or Yes
Doesn't Matter

1. How do you feel about the job you are in now?

 = Unhappy with   = Just OK   = Happy with

2. If you had a job before, how did you feel about it?

 = Unhappy with   = Just OK   = Happy with

3. Would picking job possibilities from videos about them be helpful to you?

 = No   = Doesn't matter   = Yes

1.   Based on your Work Journal and Resume, what jobs have you looked into, and

how did you do that?

2. Did you decide based on what interested you; what you were good at?

3. Describe your current and past job(s) and what you liked and didn't like about them.

4. What three types of jobs would you like to do?

Appendix D

Likert Scale Questionnaire and Open ended Questions for Staff Facilitator on

Procedure Acceptability

Pick one a number from 1 to 5 that best corresponds, with 1 = least; 5 = most

1. How easy was it to assist administering this program to your student?

    1   2   3   4   5

2. How much assistance did your student require to complete the program?

    1   2   3   4   5

3. How interesting did you feel this program was for your student?

    1   2   3   4   5

4. Were there any particular problems with the administering of this program that

    you would like to share?

5. What, if anything, did you find positive about this program?

Appendix E

Likert Scale and Open Ended Questionnaire for Students on Procedure's

Acceptability

Pick the one that best describes how you feel:

= Didn't like/No/Hard   = OK /Doesn't matter   = Liked / Yes/ Easy

1. How easy was this program to take?

    = Very Hard   = OK   = Very Easy

2. How interesting or fun did you find this program?

    = Not at all   = OK   = A Lot

1. What was the most interesting about this program?

2. What gave you the most difficulty about this program?

3. Do you feel this was a good way to learn about jobs that might be good for you?

Appendix F

Administrative Employment Staff Questionnaire on Tool's Effectiveness

Student job profile _____

1. Did you discover any new job related interests based on this student's job profile?

    _____Yes   _____No

2. Did you discover any new job related proclivities (e.g. indoor/outdoor,

    social/independent) based on this student's job profile?

    _____Yes   _____No

3. Did you discover any new, useful information regarding this student's strengths or

    weaknesses in relation to job interests based on this student's job profile?

    _____Yes   _____No

4. Did you learn about new job possibilities for this student based upon the choices

    that this student made using this tool?

_____Yes   _____No

5. Overall, how would you rate the usefulness of information garnered from this

    student's job matching search?

        (1 = very little; 5 = very much)

1   2   3   4   5

Appendix G

Semi-Structured Interview of Employment Staff and Family on Effects of the

YES Tool

1. What did you learn about the students'(child's) job preferences, interests, or proclivities that you didn't already know before they used this tool?

2. Were the three option job choices that resulted from each student's (your child's) YES job profile the same as those that you had considered and recorded previously during our interview, or were there new options which had never been thought of? If so, please describe.

3. (for staff)Taking into consideration the preparation time , administration cost and the results of the YES program, would you consider using it to assist the job exploration process with MasonLife students in the future? Please, describe and explain. If you considered staff time completing protocol was too time consuming, but families could complete them, would this change your consideration?

4. (for family)Taking into consideration the time spent completing protocol, the cost and the results of the YES program, would you recommend Mason LIFE use this tool for students in the future?

Appendix H

Semi-Structured Interview & Questionnaire with Students on the Effects of Using

the YES Tool

Pick the one that best describes how you feel:

😞 = Nothing/Not at all 😐 = A little 😊 = A lot

1. How much new have you learned about job opportunities by taking this program?

 😞 = Nothing 😐 = A little 😊 =

A lot

2. How much new have you learned about yourself by taking this program?

 😞 = Nothing 😐 = A little 😊 =

A lot

3. How more prepared do you feel to look for a job opportunity by taking this program?

 😞 = Not at all 😐 = A little 😊 =

A lot

1. Did you learn anything new about your job interests by taking this program? If yes please tell me what you learned.

2. Did you discover job possibilities that you had never thought about before? Please describe.

3. Are you excited about what you learned?

4. If you are excited, please explain why.

5. Are you disappointed about what you learned?

6. If you are disappointed, please explain why.

7. What are the next steps that you are going to take with the information that you just learned? (If applicable)

Appendix I

Instructions to the Facilitator: **Participant #**_____

Step 1: Review the list of "Job Dimensions" below (e.g., Active Learning/Active Listening). See the Description for more information.

Step 2: Using the buttons below at left, *rate the participant's current behavior or performance on the job dimension.* Rate the participant on each dimension by circling "Good," "Fair," or "Poor". For example, if the participant has fair knowledge of administration and management (see definition below), circle "F". Rate each Job Dimension by circling the "Good," "Fair," or "Poor".

Rating			Job Dimension	Description
Good	Fair	Poor	1. Active Learning/ Active Listening	Understanding the implications of new information for problem solving and decision making. This includes giving full attention to what other people are saying, taking time to understand, asking questions as appropriate, and not interrupting at inappropriate times.
G	F	P	2. Learning Strategies	Selecting and using training methods and procedures for the situation when learning or teaching new things.
G	F	P	3. Mathematic Skills	Using mathematic skills to solve problems.
G	F	P	4. Money Skills	Ability to accurately add, subtract, multiply, and divide amounts of money. Also, ability to accurately compare sums of money, use basic banking facilities, and independently make informed, appropriate decisions regarding money.
G	F	P	5. Time-Telling Skills	Ability to independently report the correct time, add time (example: "in two hours from now when it is 10:30"), report when events will take place, and estimate the time necessary to complete tasks.
G	F	P	6. Reading Comprehension	Understanding written sentences and paragraphs in work-related documents.
G	F	P	7. Written Comprehension and Expression	The ability to read and understand information and ideas presented in writing. The ability to communicate information in writing, keyboard, or other format so others will understand.

G	F	P	8. Job-Related Reading Skills	Ability to independently read written directions, information, warning signs (examples: Exit, Poison), postings (example: No Trespassing), or other print-based material at the level necessary to perform a particular job.
G	F	P	9. Speaking	Talking to others to convey information effectively.
G	F	P	10. Speech Clarity	The ability to speak clearly so others can understand.
G	F	P	11. Speech Recognition	The ability to identify and understand the speech of another person.
G	F	P	12. Oral Comprehension and Oral Expression	The ability to listen to and understand information and ideas presented through spoken words and sentences. The ability to communicate information and ideas through speech so others will understand.
G	F	P	13. Writing	Communicating effectively in writing as appropriate for the needs of the audience.
G	F	P	14. Time Management	Managing one's own time productively and the time of others.
G	F	P	15. Time Sharing	The ability to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).
G	F	P	16. Social Coordination	Adjusting actions in relation to others' actions.
G	F	P	17. Personnel and Human Resources	Knowledge of principles and procedures for personnel recruitment. This includes selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.
G	F	P	18. Customer and Personal Service	Knowledge of how to provide customer and personal services, including customer needs assessment, quality standards for services, and evaluation of customer satisfaction.
G	F	P	19. Instruction	Teaching others how to do something.
G	F	P	20. Negotiation	Bringing others together and trying to reconcile differences.

G	F	P		
G	F	P	21. Persuasion	Persuading others to change their minds or behavior.
G	F	P	22. Service Orientation	Actively looking for ways to help people.
G	F	P	23. Monitoring	Assessing performance of oneself, other individuals, or organizations to make improvements or take corrective action.
G	F	P	24. Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.
G	F	P	25. Deductive Reasoning	The ability to apply general rules to specific problems to produce answers that make sense.
G	F	P	26. Inductive Reasoning	The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
G	F	P	27. Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
G	F	P	28. Flexibility and Speed of Closure	Detecting patterns (in a figure, object, word, or sound) that is hidden by other material. The ability to quickly make sense of meaningful patterns, and to combine and organize them.
G	F	P	29. Fluency of Ideas	The ability to come up with a number of ideas about a topic.
G	F	P	30. Equipment Maintenance/Equipment Selection	Performing routine maintenance on equipment and determining when and what kind of maintenance is needed. Determining the kind of tools and equipment needed to do a job.
G	F	P	31. Installation	Installing equipment, machines, wiring, or programs to meet specifications.
G	F	P	32. Controlling, Monitoring, and Analyzing Operations	Controlling operations of equipment or systems. Watching gauges, dials, or other indicators to make sure a machine is working properly. This includes analyzing needs and product requirements to create a design.
G	F	P	33. Programming	Writing computer programs for various purposes.

G	F	P	34. Quality Control Analysis	Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
G	F	P	35. Repairing	Repairing machines or systems using the needed tools.
G	F	P	36. Technology Design	Generating or adapting equipment and technology to serve user needs.
G	F	P	37. Troubleshooting	Determining causes of operating errors and deciding what to do about it.
G	F	P	38. Memorization	The ability to remember information such as words, numbers, pictures, and procedures.
G	F	P	39. Originality	The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
G	F	P	40. Visualization	The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
G	F	P	41. Problem Sensitivity	The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
G	F	P	42. Selective Attention	The ability to concentrate on a task over a period of time without being distracted.
G	F	P	43. Perceptual Speed	The ability to quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.
G	F	P	44. Spatial Orientation	The ability to know your location in relation to the environment or to know where other objects are in relation to you.
G	F	P	45. Dynamic Flexibility	The ability to quickly and repeatedly bend, stretch, twist, or reach out with body, arms, and/or legs.
G	F	P	46. Dynamic Strength	The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue.

G	F	P		
G	F	P	47. Explosive Strength	The ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object.
G	F	P	48. Gross Body Coordination	The ability to coordinate the movement of arms, legs, and torso together when the whole body is in motion.
G	F	P	49. Gross Body Equilibrium	The ability to keep or regain body balance or stay upright when in an unstable position.
G	F	P	50. Stamina	The ability to exert oneself physically over long periods of time without getting winded or out of breath.
G	F	P	51. Static Strength and Trunk Strength	The ability to exert maximum muscle force to lift, push, pull, or carry objects. The ability to use stomach and lower back muscles to support part of the body repeatedly over time without fatigue.
G	F	P	52. Arm-Hand Steadiness	The ability to keep one's hand and arm steady while moving the arm.
G	F	P	53. Control Precision	The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
G	F	P	54. Finger Dexterity and Manual Dexterity	The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects. The ability to quickly move one's hand, hand together with arm, or two hands to grasp, manipulate, or assemble objects.
G	F	P	55. Multilimb Coordination	The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down.
G	F	P	56. Rate Control	The ability to time movements or the movement of a piece of equipment in anticipation of changes in the speed and/or direction of a moving object or scene.
G	F	P	57. Reaction Time	The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when it appears.
G	F	P	58. Response Orientation	The ability to choose quickly between two or more movements in response to two or more different signals (lights, sounds, pictures). This includes the speed with which the correct response is started with the hand, foot, or other body part.
G	F	P	59. Speed of Limb Movement	The ability to quickly move the arms and legs.

G	F	P	60. Wrist-Finger Speed	The ability to make fast, simple, repeated movements of the fingers, hands, and wrists.
G	F	P	61. Auditory Attention	The ability to focus on a single source of sound in the presence of other distracting sounds.
G	F	P	62. Hearing Sensitivity	The ability to detect or tell the differences between sounds that vary in pitch and loudness.
G	F	P	63. Sound Localization	The ability to tell the direction from which a sound originated.
G	F	P	64. Depth Perception	The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.
G	F	P	65. Far Vision	The ability to see details at a distance.
G	F	P	66. Near Vision	The ability to see details at close range (within a few feet of the observer).
G	F	P	67. Night Vision	The ability to see under low light conditions.
G	F	P	68. Peripheral Vision	The ability to see objects or movement of objects to one's side when the eyes are looking ahead.
G	F	P	69. Glare Sensitivity	The ability to see objects in the presence of glare or bright lighting.
G	F	P	70. Visual Color Discrimination	The ability to match or detect differences between colors, including shades of color and brightness.
G	F	P	71. Administration and Management	Knowledge of business and management principles involved in planning, resource allocating, leading others, producing things, and managing people and resources.

G	F	P	72. Economics and Accounting	Knowledge of economic and accounting principles and practices, financial markets, banking, and the analysis and reporting of financial data.
G	F	P	73. Biology and Chemistry	Knowledge of plants and animals, their tissues, cells, and functions. Knowledge of the chemical composition, structure, and properties of substances and of chemical processes. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.
G	F	P	74. Physics	Knowledge and prediction of physical principles, laws, and their relationships. This includes applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.
G	F	P	75. Medicine and Dentistry	Knowledge of the information and techniques needed to diagnose and treat human injuries, diseases, and disabilities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health-care measures.
G	F	P	76. Science	Knowledge of scientific rules and methods to solve problems.
G	F	P	77. Building and Construction	Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
G	F	P	78. Engineering and Technology/Mechanical	Knowledge of engineering science and technology. This includes applying principles, procedures, and equipment to design and produce goods and services. Also, this includes knowledge of machines and tools, including their designs, use, repair, and maintenance.
G	F	P	79. Design	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
G	F	P	80. Clerical	Knowledge of clerical procedures such as word processing, managing files and records, transcribing information, designing forms, and other office procedures.
G	F	P	81. Communications and Media	Knowledge of media production, communication, and distribution, including alternative ways to inform and entertain through written, oral, and visual media.
G	F	P	82. Computers and Electronics	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
G	F	P	83. Telecommunications	Knowledge of transmission, broadcasting, switching, control, and operation of telecommunications systems.
G	F	P	84. English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

G	F	P	85. Foreign Language	Knowledge of the structure and content of a foreign (non-English) language including the meaning and spelling of words, rules of composition and grammar, and pronunciation.
G	F	P	86. Geography	Knowledge of principles and methods for describing the features of land, sea, and air masses. This includes their physical characteristics, locations, and relationships among plant, animal, and human life.
G	F	P	87. Law and Government	Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.
G	F	P	88. Mathematics Knowledge	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
G	F	P	89. Education and Training	Knowledge of how to set up a curriculum, teach individuals and groups, and measure progress.
G	F	P	90. Psychology, Sociology, and Service	Knowledge of human behavior and performance, individual differences, learning and motivation, and assessment and treatment of disorders. This includes knowledge of group behavior; ethnicity; cultures and their history; diagnosis and treatment of physical and mental problems, and career counseling.
G	F	P	91. Fine Arts	Knowledge of the theory and techniques required to compose, produce, and perform works of music, dance, visual arts, drama, and sculpture.
G	F	P	92. Public Safety and Security	Knowledge of security operations for the protection of people, data, property, and institutions. This includes relevant equipment, policies, procedures, and strategies to promote safety and security.
G	F	P	93. Sales and Marketing	Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategies and tactics, product demonstration, sales techniques, and sales control systems.
G	F	P	94. Transportation	Knowledge of moving people or goods by air, rail, sea, or road.
G	F	P	95. Food Production	Knowledge of techniques and equipment for planting, growing, and harvesting food products (both plant and animal). This includes storage and handling techniques.
G	F	P	96. Production and Processing	Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
G	F	P	97. Appearance and Hygiene	Grooming, cleanliness, clothing, and neatness to meet the standards of other workers on the same type of job.

G	F	P	98. Appropriate Communications to Co-Workers and Employer	Verbal or other communication to co-workers and employer that is task-related and focused on meeting goals or completing work. Communication is adequate but not excessive. Communication occurs at the right time and not when interactions are inappropriate.
G	F	P	99. Appropriate Communications to Public	Verbal or other communication to the public that is friendly, timely, and appropriate. Communication is adequate but not excessive. Communication occurs at the right time and not when interactions are inappropriate.
G	F	P	100. Following Directions	Consistently and completely carrying out all actions as directed by supervisors or co-workers in a timely manner. This may apply to verbal or written directions. This may include asking for clarification, immediately carrying out the actions, and checking back to report that actions have been completed.
G	F	P	101. Responding Appropriately to Correction	Consistently and completely correcting work after verbal or written feedback from supervisor or co-worker. Correction is made without emotional response. This may include asking for clarification, immediately carrying out the correction, and checking back to report that the correction has been made.
G	F	P	102. Recognizing and Reporting Potential Hazards/Emergencies	Using verbal or other communication to immediately report to supervisors or co-workers incidents in the environment that are legitimate hazards or emergencies. This includes appropriate tone of voice and specific language while making the report.
G	F	P	103. Responding to Hazards/Emergencies	Immediately responding to incidents in the environment that are legitimate hazards or emergencies by taking necessary and appropriate action to solve the problem or reduce the danger.
G	F	P	104. Safety Awareness	Working while remaining aware of one's own movements, movements of others, or changes in the environment representing threats to safety.
G	F	P	105. Punctuality	Arriving on time or before, completing work on time or before, and maintaining awareness of time while performing work.
G	F	P	106. Self-Initiative	Initiating work, performing tasks in sequence until completed, starting new tasks, and/or asking supervisors or co-workers for new tasks when previous ones have been correctly and successfully completed.

Project Title:

Does the YES Program Enhance Job Matching for a Population with

Intellectual or Developmental Disabilities? A Social Validity Study

INFORMED CONSENT: Parent Permission for Student's Participation in
Research

RESEARCH PROCEDURES

We are looking to see if you will permit your child to participate in research

to see if a video tape program can help students here at ……..decide what

jobs opportunities might be best for them. He/she might learn about some

job possibilities that she/he had never thought about before, or he/she might

learn more about what is most important for her/him when deciding about a job. The study will proceed as follows.

First, the students' files will be accessed and demographic data will be collected from those files as part of the research. Your child will later talk to the researcher and fill out a short questionnaire about types of job she/he has had, and whether he/she thinks that using this video program might be helpful. This should take about 15 minutes and will be audio taped (if you sign that that's ok) so that the researcher makes sure she has her/his answers correct.

Then, perhaps on another day, he/she will watch videos about different jobs and make choices about which ones she/he would most like. A staff member will be there to help him/her and will also help type in what things about her/him that he/she has shared, or that her/his teachers have gotten to know about him/her that might be important on a job. The researcher and her assistant will be watching them and taking notes to see whether this would be a good program for ██████████ students to use. They will also be videotaped (if you sign that it's ok) so that we make sure we don't miss anything. Watching the videos and making the choices should take about 30 minutes, but if it takes longer, or if the student needs a

break, he/she can finish it later. When they are finished, the researcher will ask your child some questions and have her/him fill in a short questionnaire about what he/she thought about the program. This should just take five to 10 minutes.

Lastly, your child will meet again with the researcher to talk about the job results that she/he has received after completing the program. Again, if you sign that this is ok, this will be audiotaped so the researcher makes sure she doesn't miss anything. This final interview should take about five to ten minutes.

RISKS

There are no risks for participating in this research.

BENEFITS

Your child might learn about job possibilities that he/she never thought of before, or might learn more about parts of him/herself that are important when looking for a job he/she would be happy doing.

CONFIDENTIALITY

We will not share your child's name, the tapes, or videos with anyone. Only the researcher and the ▮▮▮▮▮▮▮ Staff will know your child's name, and pseudonyms or numbers will be used when data collecting and reporting.

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Audio and videotapes will be kept securely locked, and will be destroyed after three years.

PARTICIPATION

Your child does not have to be in this study if you don't want him/her to, or he/she chooses not to.   He/she is being given a separate assent permission form as well. You may also stop his/her participation in the study at any time. This study does not cost you or your child any money.

CONTACT

This research is being conducted by Kim Michaud through the ██████ ██ She may be reached at (304) 639-3533 for questions or to report a research-related problem. Her faculty advisor is ████████████████ who can be reached at ████ 993-4136. You may contact the ████████████████████████ of Research Subject Protections at ███-993-4121 if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to ████████████████████ procedures governing your participation in this research.

CONSENT

I have read this form and agree to allow

_____ my child to participate in this study.

_____Name

_____ Date of Signature

Permission to Get Audio and Video of Your Child

I agree to allow_____ my child to be

audiotaped

_____YES   _____NO

I agree to allow_____ my child to

be videotaped

_____YES   _____

Project Title:

Does the YES Program Enhance Job Matching for a Population with

Intellectual or Developmental Disabilities? A Social Validity Study

INFORMED CONSENT: Student Permission for Participation in Research

RESEARCH PROCEDURES

We are looking to see if a video tape program can help students here at

▮▮▮▮▮▮▮ decide what jobs opportunities might be best for them. You

might learn about some job possibilities that you never had thought about

before, or you might learn more about what is most important for you when

you are deciding about a job. The study will proceed as follows.

First, your files will be accessed and information such as your gender,

ethnic background, grades, classes taken, diagnoses, etc. will be collected

from those files as part of the research.   Later on, you will talk to the

researcher, and fill out a short questionnaire about types of jobs you've had,

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and whether you think that using this video program might be helpful. This should take about 15 minutes and will be audio taped (if you sign that that's ok) so that the researcher makes sure she has your answers correct.

Then, perhaps on another day, you will watch videos about different jobs and make choices about which ones you would most like. A staff member will be there to help you and will also help type in what things about you that you have shared, or that your teachers have gotten to know about you, that might be important on a job. The researcher and her assistant will be watching you and taking notes to see whether this would be a good program for ██████████ students to use. You will also be videotaped (if you sign that it's ok) so that we make sure we don't miss anything. Watching the videos and making the choices should take about 30 minutes, but if it takes longer, or if you need a break, you can finish it later. When you are finished, the researcher will ask you some questions and have you fill in a short questionnaire about what you thought about the program. This should just take five to 10 minutes.

Lastly, you will meet again with the researcher to talk about the job results that you received after completing the program. Again, if you sign that this is ok, this will be audiotaped so the researcher makes sure she

doesn't miss anything. This final interview should take about five to ten minutes.

RISKS

There are no risks for participating in this research.

BENEFITS

You might learn about job possibilities that you never thought of before, or you might learn more about parts of yourself that are important when looking for a job you would be happy doing.

CONFIDENTIALITY

We will not share your name, the tapes, or videos with anyone. Only the researcher and the ████████ Staff will know your name.

PARTICIPATION

You do not have to be in this study if you do not want to. You may also stop doing the study at any time. This study does not cost you or your parents any money

CONTACT

This research is being conducted by Kim Michaud through the ████████ ██ She may be reached at (304) 639-3533 for questions or to report a research-related problem. Her faculty advisor is ████████████████ who can be reached

at ▮▮▮▮ 993-4136. You may contact the ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ at ▮▮-993-4121 if you have questions or

comments regarding your rights as a participant in the research.

This research has been reviewed according to ▮▮▮▮▮▮▮▮▮▮▮▮

procedures governing your participation in this research.

CONSENT

I have read this form and agree to participate in this study

_____Name

_____ Date of Signature

Permission to Get Audio and Video of You

I agree to be audiotaped

_____YES   _____NO

I agree to be videotaped

_____YES   _____NO

Project Title:

Does the YES Program Enhance Job Matching for a Population with

Intellectual or Developmental Disabilities? A Social Validity Study

INFORMED CONSENT FORM: Employment Staff Permission for Participation in

Research

RESEARCH PROCEDURES

This research is being conducted to evaluate the social validity of a tool, the YES job

search program, which was designed specifically for the intellectually and

developmentally disabled population to assist them with finding suitable employment

opportunities based on their interests, proclivities, and aptitudes. It will evaluate whether

the ▮▮▮▮▮▮ staff and students find that this type of tool is needed, whether its

procedure is acceptable, and whether its results are sufficiently effective, for ▮▮▮▮

▮▮▮ employment program's purposes.

   If you agree to participate, you will be asked to participate in: (a) completing a

Likert scale questionnaire and participating in an audio taped semi-structured interview

with the researcher regarding what steps are entailed in making job opportunity

placements for ▮▮▮▮▮▮ students, and what additional information you would like to

see resulting from the YES Program's job option profile (30 minutes); (b)

collaboratively design a measure with the researcher which you will use to compare with

each participating student's job option profile (15 min.); (c) score each student's

completed YES job option profile as it compares you're your expectation measure (10

min./per student – there will be no more than 9 participating students); and (d) participate

in an audio taped semi-structured interview with the researcher about your perception of

the effectiveness of the program's results (30 minutes).

RISKS

There are no foreseeable risks for participating in this research

BENEFITS

The benefits to you may include a source for enhanced information that can further assist

in helping ▇▇▇▇▇▇ students find suitable job options, if the tool is found to produce

effective results. Even if the results are found to be negligibly effective, the program's

limitations could be known for future reference.

CONFIDENTIALITY

The data in this study will be confidential. Your name or other identifiers will not be used

on any research data; only pseudonyms or numbers will be used. The audio tapes will be

locked and secured, and will only be used for transcription purposes. They will be

destroyed within three years.

PARTICIPATION

Your participation is voluntary, and you may withdraw from the study at any time and for

any reason. If you decide not to participate or if you withdraw from the study, there is no

penalty or loss of benefits to which you are otherwise entitled. There are no costs to you

or any other party.

CONTACT

This research is being conducted by Kim Michaud through the ██████████████████

█████████████████████████████████. She may be reached at (304) 639-

3533 for questions or to report a research-related problem. Her faculty advisor is ██

██████████████ who can be reached at ████ 993-4136. You may contact the ████

████████████████████████████████ at ███-993-4121 if you have

questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to ██████████████████ procedures

governing your participation in this research.

CONSENT

I have read this form and agree to participate in this study.

_____

Name

_____

Date of Signature

Version date:

I agree to be audiotaped

_____YES   _____NO

Project Title:

Does the YES Program Enhance Job Matching for a Population with

Intellectual or Developmental Disabilities? A Social Validity Study

INFORMED CONSENT General Staff Permission for Participation in Research

RESEARCH PROCEDURES

This research is being conducted to evaluate the social validity of a tool, the YES job

search program, which was designed specifically for the intellectually and

developmentally disabled population to assist them with finding suitable employment

opportunities based on their interests, proclivities, and aptitudes. It will evaluate whether

the ▬▬▬▬ staff and students find that this type of tool is needed, whether its

procedure is acceptable, and whether its results are sufficiently effective, for ▬▬▬

▬▬s employment program's purposes.

If you agree to participate, you will be asked to collaborate with other staff

members to complete the attached form for three participating students during fifteen

minutes at weekly staff meetings. Twelve students, three from each class, will be

participating in the research. for no more than nine ▬▬▬▬ students that you teach.

The completed form will then be input into the YES program by the researcher who will

also help the student use the program.

RISKS

There are no foreseeable risks for participating in this research.

BENEFITS

There are possible indirect benefits of your participation for the ▮▮▮▮▮▮▮ employment program and the Mason LIFE students: (a) you may learn about your students and their employment attributes in ways you had not been aware of previously; and (b) you will become aware of the benefits and limitations of another tool, the YES program, that you may choose to utilize with the job matching process for ▮▮▮▮▮▮▮ students.

CONFIDENTIALITY

The data in this study will be confidential. Your name or other identifiers will not be used on any research data; only pseudonyms or numbers will be used.

PARTICIPATION

Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party

CONTACT

This research is being conducted by Kim Michaud through the ▮▮▮▮▮▮▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ She may be reached at (304) 639-3533 for questions or to report a research-related problem. Her faculty advisor is ▮▮ ▮▮▮▮▮▮▮▮▮ who can be reached at ▮▮ 993-4136. You may contact the ▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ at ▮▮-993-4121 if you have

questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to ██████████████ procedures governing your participation in this research

CONSENT

I have read this form and agree to participate in this study

_____

Name

_____

Date of Signature

Appendix N

Newsletter Submission

During the last months of the semester, Kim Michaud, a doctoral student

from ███████████, will be conducting research with some of the ██████████ students.

The purpose of her study will be to see how staff and students perceive the importance,

usefulness and acceptability of the YES program. The YES program is a tool specifically

designed to assist individuals with intellectual or developmental disabilities to find

suitable occupations that are matched with their interests and aptitudes. If you are

interested in getting more information, feel free to contact ██████████, or you can contact

Kim Michaud at kmichaud@██████████

Appendix O

Sample Observation Sheet

Observer Name _____   Date _____   Session

_____   Live_____   Taped_____

Student   _____

Time Start:_____   Time End:_____

Student Asks for Assistance	Facilitator Volunteers Assistance	Student needs little/no assistance	Student Accepts Offered Assistance (Needed)	Student Rejects Offered Assistance (Not Needed)	Facilitator Must Take Over

Student is engaged	Student loses interest		Student Shows Enjoyment		Student Shows Frustration

Notes

Project Title:

Does the YES Program Enhance Job Matching for a Population with

Intellectual or Developmental Disabilities? A Social Validity Study

INFORMED CONSENT General Staff Permission for Participation in Research

RESEARCH PROCEDURES

This research is being conducted to evaluate the social validity of a tool, the YES job

search program, which was designed specifically for the intellectually and

developmentally disabled population to assist them with finding suitable employment

opportunities based on their interests, proclivities, and aptitudes. It will evaluate whether

the ▮▮▮▮▮▮ staff and students find that this type of tool is needed, whether its

procedure is acceptable, and whether its results are sufficiently effective, for ▮▮▮▮

▮▮▮▮ employment program's purposes.

　　　　If you agree to participate, you will be trained to assist the researcher in recording

observations about how acceptable the student participants and the researcher as

facilitator find using the YES job tool program. You will observe and record how much

assistance the pilot student participants require from the researcher in order to make job

option choices while watching videos and listening to additional information about the

options. You will also observe and record about how enjoyable the pilot students and the

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researcher find utilizing the YES tool program. To train you, the researcher will compare

your observations with the observations she records watching the video tapes of the

sessions until interobserver agreement between you and the researcher is at least 90%

using the formula: Number of Agreements/(Number of Agreements + Disagreements) x

100= 90%. In the same manner, you will also be trained to complete the fidelity

treatment measure in order to record how faithful the researcher in assisting the student's

use of the YES job matching video program. Once the training is completed, you will be

asked to observe and record at least 33% of the live remaining sessions, and watch/

record observations of 33% of the tapes of those sessions.   The sessions should take no

longer than one ½ hours each.

RISKS

There are no foreseeable risks for participating in this research.

BENEFITS

You will be paid $15/hour for your participation. There may also other possible

direct benefits for participation, for you will not only have the opportunity to be trained

and participate in quality research observation methods, but your participation can be

documented for academic and resume purposes.

CONFIDENTIALITY

The data in this study will be confidential. Your name or other identifiers will not be used

on any research data, only pseudonyms or numbers will be used.

PARTICIPATION

Your participation is voluntary, and you may withdraw from the study at any time and for

any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party

CONTACT

This research is being conducted by Kim Michaud through the ███████████████ ████████████████████████████ She may be reached at (304) 639-3533 for questions or to report a research-related problem. Her faculty advisor is ██ ████████████ who can be reached at ████ 993-4136. You may contact the ████ ███████████████████████████ at ███-993-4121 if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to ██████████████████ procedures governing your participation in this research

CONSENT

I have read this form and agree to participate in this study

_____

Name

_____

Date of Signature

I agree to participate, but I would only be able to participate for _____

total hours.

I agree to participate, but I am only available on these

days_____ between these

hours_____, on these

dates_____

Appendix Q

Fidelity Treatment Measure for Completion of YES Aptitude Protocol

Date_____   Student_____

1. Researcher has received completed protocol for student from staff and

    made sure that they are complete _____

2. Researcher has input the protocol data into the student's confidential job

    seeking account_____

Notes

Appendix R

Fidelity Treatment Measure for YES Program Intervention

Date:_____

Researcher_____

Student_____

1. The researcher explained the directions to the student clearly_____

2. The researcher assisted the student when asked for help_____

3. The researcher assisted the student when it appeared they needed help, but may

   not have asked_____

4. The student completed making the job option choices_____

5. The researcher input the protocol correctly_____

6. Job profile for student was received_____

<u>Notes</u>

Questionnaire for Staff Regarding Acceptability of YES Aptitude Protocol

Please complete the remaining questions after the protocols are discussed at staff meeting

Pick one a number from 1 to 5 that best corresponds, with 1 = least; 5 = most

1. How successful was the staff discussion in coming to agreement regarding those items on the protocol?

      1   2   3   4   5

2. When considering the time and effort it took to complete the students' protocols, how acceptable do you find it as a tool to help students discover employment options?

      1   2   3   4   5

3. If completing the student protocols took too much time/effort for the staff, how much more acceptable would you find this tool if the protocols were first completed by others (i.e. parents, former teachers, vocational rehabilitation personnel) ?

      1   2   3   4   5

4. What additional comments, or suggestions do you want to add?

Amended Parent's Permission Form

Project Title:

Does the YES Program Enhance Job Matching for a Population with

Intellectual or Developmental Disabilities? A Social Validity Study

<u>PART I</u>

 INFORMED CONSENT: Parent Permission for Student's Participation in

Research

 RESEARCH PROCEDURES

   We are looking to see if you will permit your child to participate in

research to see if a video tape program can help students here at █████

██████ decide what jobs opportunities might be best for them. He/she might

learn about some job possibilities that she/he had never thought about

before, or he/she might learn more about what is most important for her/him when deciding about a job. The study will proceed as follows.

First, the students' files will be accessed and demographic data will be collected from those files as part of the research. Your child will later talk to the researcher and fill out a short questionnaire about types of job she/he has had, and whether he/she thinks that using this video program might be helpful. This should take about 15 minutes and will be audio taped (if you sign that that's ok) so that the researcher makes sure she has her/his answers correct.

Then, perhaps on another day, he/she will watch videos about different jobs and make choices about which ones she/he would most like. A staff member will be there to help him/her and will also help type in what things about her/him that he/she has shared, or that her/his teachers have gotten to know about him/her that might be important on a job. The researcher and her assistant will be watching them and taking notes to see whether this would be a good program for ▮▮▮▮▮▮ students to use. They will also be videotaped (if you sign that it's ok) so that we make sure we don't miss anything. Watching the videos and making the choices should take about 30 minutes, but if it takes longer, or if the student needs a

break, he/she can finish it later. When they are finished, the researcher will ask your child some questions and have her/him fill in a short questionnaire about what he/she thought about the program. This should just take five to 10 minutes.

Lastly, your child will meet again with the researcher to talk about the job results that she/he has received after completing the program. Again, if you sign that this is ok, this will be audiotaped so the researcher makes sure she doesn't miss anything. This final interview should take about five to ten minutes.

RISKS

There are no risks for participating in this research.

BENEFITS

Your child might learn about job possibilities that he/she never thought of before, or might learn more about parts of him/herself that are important when looking for a job he/she would be happy doing.

CONFIDENTIALITY

We will not share your child's name, the tapes, or videos with anyone. Only the researcher and the ███████ Staff will know your child's name, and pseudonyms or numbers will be used when data collecting and reporting.

Audio and videotapes will be kept securely locked, and will be destroyed

after three years.

PARTICIPATION

Your child does not have to be in this study if you don't want him/her to, or

he/she chooses not to.   He/she is being given a separate assent permission

form as well. You may also stop his/her participation in the study at any

time. This study does not cost you or your child any money.

CONSENT

I have read this form and agree to allow

_____ my child to participate in this study.

_____Name

_____ Date of Signature

Permission to Get Audio and Video of Your Child

I agree to allow_____ my child to be

audiotaped

_____YES   _____NO

I agree to allow_____ my child to

be videotaped

_____YES   _____NO

PART II

INFORMED CONSENT: Family Member Consent to Participate in

Research

RESEARCH PROCEDURES:

If you will permit your child to participate in the video tape program

research, we would like to know if you also would consent to participate.

Your insight and perspective on your child's job preparation, experiences

and goals would greatly enrich this research.   Your participation would

proceed as follows, and could be done in person, on the phone, or via computer communication such as Skype.

The researcher will collect basic demographic data such as age, ethnicity, profession, and number of children with and/or without disability. She will conduct a semi-structured interview and ask you to complete a short Likert scale questionnaire regarding your child's previous job preparation, experiences and goals. If you agree, this interview will be audiotaped to ensure that the researcher records your interview correctly. The interview and questionnaire should take no longer than 15 to 20 minutes to complete.

After your child has completed the program and received the job portfolio, the researcher would like to conduct another interview and have you complete a short Likert scale questionnaire regarding the job portfolio results. In particular, she will be interested if your child discovered job possibilities that may not have been considered before. This interview will also be audiotaped, if you give permission, and should take no longer than 10 minutes.

Lastly, the researcher would like you to look at the attached 106 item aptitude protocol, which the staff completed for your child as part of this job matching program. The researcher would like to know: (a) if you think that it would be reasonable for parents to complete this protocol, and (b) if you would be willing to complete it. If you are willing to complete it, the researcher will make arrangements for you to forward the results to her, or fill it out with you on the phone, or via computer. It will be helpful to compare the accuracy and time expenditure for both staff and family completion.

RISKS

There are no risks for participating in this research.

BENEFITS

There are no direct benefits to you for participating.

CONFIDENTIALITY

We will not share your name or the audiotapes with anyone. Only the researcher and will know your name, and pseudonyms or numbers will be used when data collecting and reporting. Audiotapes and the corresponding

transcripts will be kept securely locked, and will be destroyed after three

years.

PARTICIPATION

You do not have to be in this study if you do not want to. You may

also stop doing the study at any time. This study does not cost you any

money.

CONTACT

This research is being conducted by Kim Michaud through the

▮▮

▮▮▮▮▮▮▮▮ She may be reached at (304) 639-3533 for questions or to report

a research-related problem. Her faculty advisor ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

who can be reached at ▮▮▮ 993-4136. You may contact the ▮▮▮▮▮▮▮▮

▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ at ▮▮ -993-4121 if you

have questions or comments regarding your rights as a participant in the

research.

This research has been reviewed according to George Mason

University procedures governing your participation in this research.

CONSENT

I have read this form and agree to participate in the

interview/questionnaire portion of this study

_____Name

_____ Date of Signature

I have read this form, looked at the attached 106 item aptitude

protocol, and agree to evaluate and complete the protocol for this study.

_____Name _____Date

Signature

Appendix Y1

Pre YES Questionnaire for Employment Support Staff

Student_____

1. Previously, how often have you supported this student on job sites?

(0 = never; 1 = once; 2 = twice; 3 = three or more)

0   1   2   3

2. How would you rate this student's interest in the current job?

(0= none at all; 1 = minimal; 2 = average; 3 = maximum)

0   1   2   3

3. How would you rate this student's challenges in the current job?

(0= none at all; 1 = minimal; 2 = average; 3 = maximum)

0   1   2   3

4. After training, how would you rate this student's need for support on this job site?

(0 = none; 1 = occasional, from regular staff; 2 = constant, from regular or special staff)

0   1   2

If you are aware of a type of job(s) that this student has expressed or shown

interest in, please indicate

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Appendix Y2

Pre YES Questionnaire for Employment Instructor(s)

Student _____

1. Are you aware of any particular job interests that this student has expressed?

_____Yes   _____No

If yes, please indicate

_____

2. Are you aware of any specific challenges that must be overcome when

    considering job matches for this student?

_____Yes   _____No

If yes, please indicate

_____

Appendix Y3

Post YES Questionnaire for Employment Support Staff

Student_____

1. Did you learn anything new about this students job interests and corresponding

   aptitudes? If so, please indicate

_____Yes   _____No

_____

2. How would you rate the usefulness of what you learned about the student's job

   interests based on his job profile?

(1 = least; 5 = most)

1   2   3   4   5

3. How would you rate the usefulness of what you learned about the student's

   aptitudes based upon his job preferences in his job profile?

(1 = least; 5 = most)

1   2   3   4   5

Appendix Z

Family Semi-Structured Interview on Goal

1. Please describe your child's job exploration process. Please include any successful, as well of challenging placements, if any, and indicate what you see as contributing to both challenges, and successes.

2. Did you child ever use formal interest or aptitude tools, or web resources to help with the job matching/exploration? If so, could you describe them?

3. Do you think that job-match profiles based on your child's interest and aptitudes would be helpful? If so, what kind of additional information about your child's interests and aptitudes would be helpful?

4. If you had to pick two or three job possibilities that would be good for your child, what would they be?

Sample Parent EMail

Hi_____,

I am attaching _____'s job profile results from when she took the

YES job matching video program. Before you look at them, please be

kind enough to jot down 2 -3 job possibilities you think would suit

_____.

I would like to conduct a phone or Skype interview with you sometime

this week. I will be asking questions about how you view the

importance of the goal of the job matching program for the University

Program, and how you viewed the effectiveness of the job profile

results.

Please let me know when and how we can touch base.

Thanks so much

kim

Appendix Z2

Table of YES tool Job List
(Morgan, 2008, p. 32)

Mostly Outdoors

Able Seaman, Airport Utility Worker, Amusement Park Worker, Asphalt Paver, Boat Repair Worker, Brick Mason, Carpenter, Dock Worker, Equipment Operator Farmer – Dairy, Farmer – Grain, Forest Worker, Garbage Collector, Gardener, House Painter, Logger, Mail Carrier, Messenger, Nursery Worker, Utility Cable Worker.

Indoor/Heavy Work/Mostly Alone

Auto Mechanic, Building Painter, Carpet Cleaner, Cutting Machine Operator, Domestic Housekeeper, Dry Cleaner, Electrician, Grocery Stocker, Hotel Housekeeper, Insulation Worker, Janitor, Laundry Worker, Plumber, Sewing Machine Operator, Sheet Metal Worker, Shop Painter, Slot Machine Repairer, Upholstery Worker, Welder, Woodshop Assistant.

Indoor/Heavy Work/Interact with Co-Workers

Auto Body Repairer, Auto Detailer, Butcher , Department Store Clerk, Farm Equipment Mechanic, Fast Food Cook, Fire Station Attendant, Food Preparation Worker, Furniture Mover, Hand Packer, Heating and Air Conditioning Worker, Machinery Maintenance Worker, Machinist, Print Press Operator, Restaurant Cook,

Shipping/Receiving Worker, Tool and Die Maker, Veterinary Assistant, Video Assistant, Warehouse Worker.

Indoors/Heavy Work/Interact with Public

Arcade Worker, Baggage Porter, Baker, Child Care Worker, Copy Center Worker, Dining Room Attendant, Driver/Sales Worker, Fast Food Cashier, Grocery Cashier, Grocery Clerk, Home Health Aide, Licensed Practical Nurse, Locksmith, Occupational Therapy Assistant, Personal Care Aide, Physical Therapy Assistant, Radiological Technician, Recreation Assistant, Security Guard, Waiter/Waitress.

Indoors/Light Work/ Interact with Co-Workers

Bicycle Repairer, Chemical Plant Worker, Communications Equipment Mechanic, Computer Repairer, Data Entry Worker, Electronics Assembler, Floral Designer, Frame Shop Worker, Graphic Artist, Greenhouse Worker, Health Information Technician, Motor Vehicle Dispatcher, Order Clerk, Packing/Filling Operator, Pest Control Worker, Pet Care Worker, Plastics Machine Operator, Robotics Machine Operator, Secretary, Sign Shop Worker.

Indoors/Light Work/Interact with Public

Airport Passenger Assistant, Auto Parts Sales, Bank Teller, Barber, Customer Service Representative, Dental Assistant, Hair Stylist, Hotel Desk Clerk, Human Service Worker, Library Worker, Manicurist, Medical Assistant, Paraeducator, Pharmacist Technician, Receptionist, Rental Clerk, Retail Salesperson, Service Station Attendant, Telemarketer, Theater Worker.

Appendix Z3

Observation Training Checklist

Student Asks for Assistance	Facilitator Volunteers Assistance	Student needs little/no assistance	Student Accepts Offered Assistance (Needed)	Student Rejects Offered Assistance (Not Needed)	Facilitator Must Take Over
	without student asking	working independently	when offered student accepts & seems to learn something	actively says "not needed"	Student seems at a loss, or there is no instruction available

Student is engaged	Student loses interest		Student Shows Enjoyment		Student Shows Frustration
focused, inter-acting with tool	looking around, asks when it will be done		smiles, laughs, looks intent, shows agreement or disagreement with what is shown		stops, makes frustrated comments, gestures, or expressions

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Biography

Kim M Michaud graduated from Torrance High School, Torrance, California, in 1972. She received her Bachelor of Arts from Fairfield University in 1976. She homeschooled one of her four children who has Special Needs for twelve years. Subsequently, she worked with the Diocese of Wheeling/Charleston for the state of West Virginia to start a program which provided instructor support for Special Need students in all Catholic Elementary Schools and High Schools in the state. Kim received a Master in Arts in Special Education from Marshall University in 2007.