

EXAMINING EMPLOYER ATTITUDES AND VALUED EMPLOYABILITY  
SKILLS FOR INDIVIDUALS WITH AND WITHOUT DISABILITIES

A Dissertation

by

SONG JU

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2012

Major Subject: Educational Psychology

Examining Employer Attitudes and Valued Employability Skills for Individuals

With and Without Disabilities

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Chair of Committee,	Dalun Zhang
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## ABSTRACT

Examining Employer Attitudes and Valued Employability Skills for Individuals With  
and Without Disabilities. (August 2012)

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This dissertation presents three separate studies designed to examine perspectives on employment for individuals with disabilities from employers and educators. First, a literature review was conducted on the studies published in the past decade to provide an update of employers' attitudes toward employees with disabilities. Investigated factors included studies' methodologies, research procedures, and employer characteristics. Research findings indicated that employers increasingly showed favorable attitudes toward individuals with disabilities and demonstrated willingness to hire workers with disabilities. Employers' previous experience with workers with disabilities was associated with positive employer attitudes.

Secondly, 168 employers and 105 educators were surveyed regarding their perspectives on valued employability skills for entry-level employees with and without disabilities. The second study primarily focused on examining employers' perspectives of the most valued employability skill areas and specific employability skills as well as associated employer factors (i.e., respondents' genders and types of business/industry).

Differences between employers' expectations for employees with disabilities and for those without disabilities were analyzed. The study results presented findings on important employability skills and discrepancies between rating for employees with and without disabilities were discussed, and reported the effects of respondent factors.

Lastly, the third study investigated and compared both employers and educators' expectations on important employability skills. Study identified differences of ratings on important employability skills between employers and educators. Study also found out how they viewed differently on employability skills for employees with and without disabilities.

To sum up, this dissertation revealed updated trends of employers' attitude toward workers with disabilities. It also identified critical employability skills viewed by employers and educators for entry-level workers with disabilities. The comparisons between employers and educators' perspectives provided information on what schools should include or emphasize in vocational preparation programs to prepare students with disabilities for future employment.

## DEDICATION

This dissertation is dedicated to my parents and grandparents for their enduring support and love. I also dedicate it to my lovely daughter Vicky, who was born on November 23, 2011, and since then has become the joy of my life.

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## CHAPTER I

### INTRODUCTION

Historically, employment for individuals with disabilities has been a critical issue that has received attention both from the government and the larger society. Employment is viewed as being linked to various aspects of life, including financial status, community living, self-esteem, independence, social relationships (Butterworth & Gilmore, 2000; Stephens, Collins, & Dodder, 2005). However, as a group, despite the importance of these quality-of-life issues, individuals with disabilities encounter experience low employment rates, low salaries, high job loss rates, and unsatisfying work environment.

Since the 1970s, federal legislation and other federal initiatives have been undertaken to promote employment for individuals with disabilities (IWDs). For example, the landmark Vocational Rehabilitation Act of 1973 called for equal opportunity and nondiscrimination in educational and workplace settings for IWDs. The Americans with Disabilities Act of 1990 was another milestone of protecting civil rights for IWDs and mandate that employers provide reasonable accommodations in employment and protect IWDs from workplace discrimination. More recently, the Workforce Investment Act (WIA) of 1998 and the Ticket to Work and Work incentives Improvement Act (TWWIIA) both reinforce federal support in various areas of employment for IWDs.

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This dissertation follows the style of *Career Development and Transition for Exceptional Individuals*.

Despite the big push and enormous investment from the federal government, the employment problems for IWDs persist, in particular high rates of unemployment and underemployment. Employers are key stakeholders in the job market, so their attitudes and perspectives matter greatly and need to be taken into consideration when trying to improve the dismal employment situation of IWDs. A number of studies have been conducted to assess employers' attitudes towards workers with disabilities and their perspectives or expectations on employability skills. Many studies have found that one of the employment obstacles for IWDs is employers' negative attitude towards employing IWDs (Millington, Rosenthal, & Lott, 1998; Unger, 2002).

Hernandez, Keys, and Balcazar (2000) and Unger (2002) conducted two literature reviews on employer attitudes toward workers with disabilities, which included studies published before 2000. As indicated by several of these studies, employers reported concerns and doubts about the employability skills of IWDs, such as lack of work skills, poor attendance, abusive behaviors, refusing to accept instructions, and safety (Chadsey & Beyer, 2001; Olson, Cioffi, Yovanoff, & Mank, 2001; Petty & Fussell, 1997).

Teaching employability skills is an important component in vocational preparation programs offered by schools. However, the question is whether such skills instruction matches the demands of today's workplace. Thus, there is a need to understand employers' expectation on employability skills for entry-level job (Wehman, 2011). Educators' perceptions of valued employability skills are also important and are linked to their expectations for students with disabilities (Harvey, Cotton, & Koch, 2005).

In the current global economy, the workplace and its requirements are undergoing tremendous changes, posing some critical questions. For example, what do recent studies say about employer attitudes towards worker with disabilities? For today's workforce, what employability skills do employers consider critical for job success? What skills do educators view as important? Are there differences between the perceptions of these two groups?

The current body of literature has not yet answered those questions, thus there is a need to conduct studies to fill the gap in this topical area. The purposes of the current study were to: (a) identify updated employers' attitudes towards workers with disabilities and compare current trends to the trends identified a decade ago; (b) examine employers' and educators' perspectives on valued employability skills for entry-level employees with and without disabilities; (c) compare employers' expectations for employees with and without disabilities and examine whether differences between their expectations are associated with employers' attributes; and (d) identify any differences between the perspectives of educators and employers on valued employability skills for entry-level employees with and without disabilities.

This dissertation consists of five chapters with Chapters II to IV written in manuscript format so as to be submitted for publication in peer-reviewed journals. The structure and descriptions of each chapter are presented below:

- Chapter I: Presents a succinct overview of problems, research needs, and general research questions.

- Chapter II: Presents a literature review of employer attitudes towards employees with disabilities in the past decade.
- Chapter III: Presents findings of employers' expectations on important employability skills for employees with and without disabilities.
- Chapter IV: Presents reports of educators' and employers' perspectives on important employability skills for employees with and without disabilities and the differences between their perspectives.
- Chapter V: Presents general, leading to a discussion of the overall research findings, implications, and limitations.



## CHAPTER II

### EMPLOYER ATTITUDES TOWARD WORKERS WITH DISABILITIES: A REVIEW OF RESEARCH IN THE PAST DECADE

Employment has been identified as a critical need for individuals with disabilities (IWDs), given that it is an essential component of the quality of adult life (Rogan, Grossi, & Gajewski, 2002). However, historically, IWDs have not had equal opportunities to pursue employment and have encountered discrimination and stigma in the workplace. As a result, since the 1970s, major federal legislation and other initiatives focused on the critical need to promote employment opportunities and outcomes for IWDs. Specifically, the landmark legislation of the Vocational Rehabilitation Act of 1973 pioneered this series of legislation, followed by the Americans with Disabilities Act (ADA) of 1990. More recently, the Workforce Investment Act (WIA) of 1998 and the Ticket to Work and Work Incentives Improvement Act (TWWIIA) of 1999 further reinforced the federal emphasis on and investment in enhancing employment for IWDs.

Nevertheless, despite the extensive support by federal legislation, public policy, federal initiatives and programs, the employment outcomes for IWDs are still disappointing. According to the latest progress report (2011) from the National Council on Disability (NCD), compared to individuals without disabilities (IWODs), IWDs continue to encounter employment problems such as lower employment rates and lower annual earnings. Since 2008, job loss for IWDs has far exceeded that for IWODs. For example, in April 2012, the employment rate for IWDs (age 16 and over) was 17.8% versus 63.8% for IWODs. Further, the unemployment rate was 12.5% and 7.6%,

respectively (U.S. Department of Labor, 2012). These employment disparities between IWDs and IWODs further result in big disparities in quality of life.

As key stakeholders in the job market employers' attitude towards employees has been identified as an important factor that influences the employment rate of IWDS (Unger, 2002). For example, negative employer attitudes, such as such as discrimination and misconceptions about disability, cause potential barriers to employment by IWDs (Livermore & Goodman, 2009). To probe this area, a large number of studies have been conducted to assess various aspects of employers' attitudes toward people with disabilities, including but not limited to: (a) employers' global attitudes toward workers with disabilities and their ADA rights; (b) employers' willingness to hire workers with disabilities; (c) employers' attitudes toward specific types of disabilities; (d) factors related to employers' attitudes (e.g., gender, company size, and experience with workers with disabilities); (e) employers' perspectives on the employability of employees with disabilities; and (e) employers' experience of or satisfaction with employees with disabilities.

To synthesize the research findings on employers' attitudes toward individuals with disabilities, Hernandez and colleagues (2000) conducted a literature review of 37 studies published between 1987 and 1999. Employers' attitudes were categorized into two types: global and specific. *Global attitudes* refer to "evaluative responses concerning a general topic that typically do not involve declaring planned actions or intentions" (Hernandez, Keys, & Balcazar, 2000, p. 5; e.g., agree or not agree with the statement "individuals with disabilities should have equal employment opportunities), while

specific attitudes often include intended behavior or making a decision (e.g., whether to hire a person with a specific disability). The authors identified the following trends regarding employer attitudes toward workers with disabilities: (a) employers were likely to have positive global attitudes but often held negative attitudes when asked specific attitudes towards workers with disabilities; (b) positive previous experiences with IWDs were related to positive employer attitudes toward workers with disabilities; (c) a discrepancy between the expressed willingness to hire IWDs and actual hiring continued but seemed to be diminishing; (d) the effects of company size and academic attainment were not directly related to employers' attitudes; (e) workers with physical disabilities were viewed more positively than workers with intellectual or psychiatric disabilities; (f) some employers reported positive attitudes toward workers placed by vocational and supported-employment programs.

Unger (2002) also reviewed the literature on employers' attitudes toward workers with disabilities, including 24 studies published before 2000. The author identified that findings regarding the benefits of and concerns about hiring workers with disabilities were inconsistent. The inconsistency was attributed to variations in research design, such as sampling and data collection procedures. Nevertheless, several findings were similar to those by Hernandez and colleagues (2000). For examples, employers' attitudes differed depending on the types and severity of disabilities the workers had. Employers who had previous experience with workers with disabilities indicated more favorable attitudes towards IWDs. Unger concluded that (a) employers seemed to be willing to sacrifice work quality in exchange for a dependable worker; (b) employers' concerns

might derive from misconceptions instead of direct experience; (c) employers were becoming more aware of the benefits of hiring workers with disabilities to enhance their companies' social image or increase the diversity of their workforce; (d) few of the studies investigated attitudes of employers who had direct experience or knowledge about their workers with disabilities.

In the 21<sup>st</sup> century, global integration and rapid technology evolution bring both challenges and opportunities for individuals with disabilities. The workplace (e.g., distance work and telecommuting) and required skills (Karoly & Panis, 2004) have undergone considerable change. The job market has a relatively short supply and employers need and want to recruit more skilled workers, including traditionally underutilized groups (King, 2011). Consequently, employers' attitudes toward workers with disabilities may also change over time. Hence, there is a need to review and synthesize findings from more recent research on up-to-date employers' attitudes.

The purpose of this study was, therefore, to conduct a systematic review of research conducted in the past decade to investigate employers' attitudes towards workers with disabilities as a complement to the reviews by Hernandez, et al. (2000) and Unger (2002).

### **Method**

A literature search was conducted using EBSCO Host and Cambridge search engines. Searched electronic databases included Cambridge Scientific Abstracts (CSA), EBSCO (Academic Search Complete), Business Source Complete, Vocational and Career Collection, Educational Resources Information (ERIC), Psychology and

Behavior Sciences, and PsychINFO. Search terms were created by using the wildcard paired combinations of keywords, including *employer, professional, manager, hire, attitude, concern, perception, satisfaction, perspective, experience, employee, worker, disability, mental, epilepsies, impairment, autism, psychiatric, and handicapped*.

To be included in the review, a study had to meet the following criteria: (a) must assess the attitudes of employers who are in charge of hiring, supervising, or terminating employees (Hernandez, Keys, & Balcazar, 2000); (b) must measure employer attitudes toward people with disabilities; and (c) must have appeared in peer-reviewed journal articles published between 1999 and 2012. Using these criteria and search methods, a total of 15 studies were included in the final review.

## **Results**

### **Studies' Characteristics**

Over half of the studies ( $N = 8$ ) were published in vocational related journals (e.g., *Journal of Vocational Rehabilitation, Rehabilitation Counseling Bulletin*). Some characteristics of studies are presented in Table 2.1. Generally, studies assessed employers' attitudes in the following areas: (a) perspectives on the performance of workers with disabilities; (b) perspectives on employability of people with specific disabilities and the likelihood of hiring them based on hypothetical scenarios; (c) experience with and future intent to hire workers with disabilities; and (d) perceived concerns and/or benefits of hiring workers with disabilities.

Attitudes were assessed through survey questionnaires, personal interviews, or focus group discussions. The types of employers included managers, human resource

Table 2.1. Characteristics of studies.

Study	Type of Participants	Company Size	Disability Investigated	Procedures
Bricout & Bentley, 2000	Employers from a national association of HR managers	from 10 to 750,000 employees	Physical Psychiatric	<ul style="list-style-type: none"> <li>• Employment Characteristics Scale (ECS) (Christman &amp; Slaten, 1991)</li> <li>• Mail questionnaires</li> </ul>
Gilbride et al., 2000*	Employers who had hired IWD from VR offices in two states	Not reported	Disabilities in general	<ul style="list-style-type: none"> <li>• Survey created by authors regarding employers' willingness to hire people with specific disabilities</li> <li>• Telephone surveys</li> </ul>
Olson et al., 2001*	Nationwide employers (HR professionals and supervisors) who had good knowledge about their employees with intellectual disabilities	Not reported	Intellectual disabilities	<ul style="list-style-type: none"> <li>• Survey created by authors regarding employees with intellectual disabilities</li> <li>• Mail questionnaires</li> </ul>
Greenan, Wu, & Black, 2002*	Local advisory committee members of secondary trade and industrial education programs from a state	Not reported	Disabilities in general	<ul style="list-style-type: none"> <li>• Survey created by authors regarding perspectives on employing IWD</li> <li>• Mail questionnaires</li> </ul>
Chi & Qu, 2003*	Employers who are members of Oklahoma Restaurant Association	from under 5 to 20 above	Disabilities in general	Survey created by authors
Smith et al., 2004*	Nationwide employers who had hired IWD from employment service agencies	Not reported	Disabilities in general	<ul style="list-style-type: none"> <li>• Questionnaires created by authors</li> <li>• Mail questionnaires</li> </ul>
Morgan & Alexander, 2005*	Managers or HR professionals from businesses in both a small and a large city	25 or less to over 200 employees	Intellectual disabilities	<ul style="list-style-type: none"> <li>• Survey created by authors</li> <li>• Mail questionnaires and telephone interviews</li> </ul>
Hand & Tryssenaar, 2006*	Local HR professionals	from 1 to 49 employees	Psychiatric	<ul style="list-style-type: none"> <li>• Modified version of the Attitudes Toward the Employability of People with Severe Handicaps Scale (ATTEMP) (Schmelkin &amp; Berkell, 1989) and surveys created by authors</li> <li>• In-person interviews and self-administered questionnaires</li> </ul>

Table 2.1. Continued

Study	Type of Participants	Company size	Disability Investigated	Procedures
Bishop et al., 2007	Employers and HR professionals from a state	from less than 50 to more than 200 employees	Epilepsy and other types of disabilities	<ul style="list-style-type: none"> <li>• Survey created by authors regarding employers' willingness to hire people with stated disabilities</li> <li>• Mail questionnaires</li> </ul>
Bryen, Potts, & Carey, 2007*	Employers	10 to over 1000 employees	Disabilities that rely on AAC	<ul style="list-style-type: none"> <li>• Employer Network Survey created by authors</li> <li>• Telephone, mail or in-person interview</li> </ul>
Tsang et al., 2007	Employers from small size firms in three cities	from 3 to 100 employees	Psychiatric	<ul style="list-style-type: none"> <li>• Interview guide developed by authors</li> <li>• In-personal interview</li> </ul>
Dalgin & Bellini, 2008	Employers and HR professionals in a Northeastern state	Not reported	Psychiatric Physical	<ul style="list-style-type: none"> <li>• Interview vignettes with video stimuli</li> <li>• Candidate Employability Scale (CES) (Krefting &amp; Brief, 1976)</li> <li>• Attitudes Toward Disabled Persons Scale-Form O (ATDP-O) (Yuker, Block, &amp; Campbell, 1960)</li> </ul>
Hernandez et al., 2008	Employers from a large city in the hiring positions	Mostly over 150 employees	Disabilities in general	<ul style="list-style-type: none"> <li>• A focus group guide developed by authors</li> <li>• Focus group discussion</li> </ul>
Hartnett et al., 2011*	Employers who used services from the Job Accommodation Network (JAN)	35 to 350,000	Disabilities in general	<ul style="list-style-type: none"> <li>• Self-developed instrument</li> <li>• Telephone interviews</li> </ul>
Houtenville & Kalargyrou, 2012	Nationwide employers of businesses in leisure and hospitality	5 to over 250 employees	Disabilities in general	<ul style="list-style-type: none"> <li>• Survey conducted by Office of Disability Employment Policy (2008)</li> <li>• Telephone interviews</li> </ul>

*Note:* Studies marked by "\*" indicated favorable attitudes toward individuals with disabilities.

professionals, and supervisors. Only one study specifically surveyed employers who had most knowledge on their workers with disabilities (i.e., Olson, Cioffi, Yovanoff, & Mank, 2001). Types of disabilities investigated in those studies included general types of disabilities, intellectual disabilities, physical disabilities (e.g., traumatic brain injury), psychiatric disabilities (e.g., schizophrenia), epilepsy, disabilities that rely on augmentative and alternative communication (AAC), and other types of disabilities.

### **Positive Attitudes and Perceived Benefits**

Among the 15 studies examined, nine (60%) indicated favorable employer attitudes toward workers with disabilities. Thus, the majority were found to be supportive of employing IWDs and indicated positive attitudes toward or willingness to hire them in future (e.g., Gilbride, Stensrud, Ehlers, Evans, & Peterson, 2000; Greenan, Wu, & Black, 2002; Morgan & Alexander, 2005). Three studies found that employers held positive attitudes toward certain types of disabilities, including intellectual disabilities (Olson, Cioffi, Yovanoff, & Mank, 2001), psychiatric disabilities (Hand & Tryssenaar, 2006), and disabilities that rely on AAC (Bryen, Potts, & Carey, 2007). In another study, Smith, Webber, Graffam, and Wilson (2004) surveyed 656 employers nationwide and found they were equally satisfied with workers with a disability and workers without a disability. Chi and Qu (2008) surveyed 70 foodservice employers statewide and also found respondents were satisfied with their experience with employees with disabilities.

In addition, employers indicated willingness to make accommodations for workers with disabilities. Employers reported multiple benefits from accommodating



workers with disabilities, including retaining qualified employees, increasing business profitability, and avoiding the costs of hiring and training new employees (Hartnett, Stuart, Thurman, Loy, & Batiste 2011). Providing accommodation also improves a company's culture and climate and many accommodations required at minimal or no additional cost (Hartnett et al., 2011; Hernandez, McDonald, Divilbiss, Horin, Velcoff, & Donoso, 2008). Olson et al. (2001) found that most respondents who were aware of the costs of accommodations indicated the costs were low. Employers surveyed in their survey reported that insurance costs for employees with intellectual disabilities were not different from those for other employees.

Studies also examined employer's perceptions of benefits when hiring IWDs. For example, Morgan and Alexander (2005) found the greatest advantage of hiring individuals with intellectual disabilities was their consistent attendance. Similarly, Chi and Qu (2008) noted that the respondents in their study reported somewhat favorable attitudes regarding dependability, adaptability, absenteeism, business cost, cooperation, accommodation, turnover, and interaction with coworkers. Hernandez et al. (2008) identified the benefits of low absenteeism rates and long tenures as a major advantage. Additionally these researchers found diversification of work settings to be a benefit of hiring individuals with disabilities.

### **Negative Attitudes and Concerns**

Negative attitudes usually derived from studies that assessed employers' preferences for some specific types of disabilities or asked them to compare workers/job candidates with and without disabilities. Bricout and Bentley (2000) asked 248

employers to rate the employability of hypothetical job applicants with different disability status (i.e., no disability, physical disability, and psychiatric disability). Applicants with seizure disorder, schizophrenia, and those who were legally blind received the lowest rankings. The authors concluded that employer perceptions of job applicants with severe disabilities were not equal to their perceptions of applicants with no disabilities. No significant differences were found between ratings for people with physical and psychiatric disabilities. Dalgin and Bellini (2008) also found that type of disability affected employers hiring decisions. However, contrary to the findings in Bricout and Bentley (2000), they noted that employers rated the employability of applicants with psychiatric disabilities significantly lower than that of applicants with physical disabilities. Bishop and colleagues (2007) surveyed 93 employers or HR professionals and found that the majority (95%) of them did not recommend disclosing a disability in the cover letter. Participants were also asked to rank the chances to hire individuals with different epilepsy labels (e.g., depression, AIDS, spinal cord injury, cancer in remission). Respondents indicated that individuals with labels of seizure disorder, schizophrenia, and legally blind were less likely to be hired than individuals with other epilepsy labels (Bishop, Stenhoff, Bradley, & Allen, 2007).

In addition, even though some studies showed that employers held receptive attitudes towards people with disabilities, they found that people with disabilities were disadvantaged in terms of job performance ratings and employers' hiring decisions compared to those without disabilities. Gilbride et al. (2000) surveyed 123 employers in two states who had hired employees with disabilities. Most employers reported they

were glad that they hired a person with a disability. However, when asked to rate the difficulties of hiring an employee with a specific disability, most respondents indicated it would be more difficult for individuals with moderate intellectual disabilities or blindness to be hired than individuals with other types of disabilities or without disabilities. In a national survey on employers' satisfaction with employees with and without a disability, Smith et al. (2004) noted that employees with a disability were rated lower on three aspects of work performance in terms of speed/rate of work, accuracy/quality of work, and workplace climate.

Common concerns identified in relevant studies included safety, productivity, job performance, and a lack of employability and skills (Houtenville & Kalargyrou, 2011; Morgan & Alexander, 2005; Tsang, Angell, Corrigan, Lee, Shi, Lam, Jin, & Fung, 2007). Some concerns were related to specific disabilities. Bryen, Potts and Carey et al. (2007) interviewed employers who hired individuals relying on ACC and identified their job barriers, including poor time management, lack of job skills or work experience, and difficulty with AAC technologies. Some employers also expressed concerns over individuals with psychiatric disabilities in terms of strange/unpredictable behaviors and symptom relapse (Tsang et al., 2007). Similarly, Hand and Tryssenaar (2006) found employers were most concerned about social and emotional skills (e.g., handling criticism, emotional control, and conflict resolution) among individuals with mental illnesses. However, it was unclear in the latter two studies if the participating employers had actually had any experiences with workers with disabilities. So their concerns could result from stereotypes of psychiatric disabilities.

## **Employer Factors**

Several employer factors were investigated by recent studies. First, when examining employers' previous experiences with individuals with disabilities, most studies found this factor was associated with favorable attitudes toward hiring applicants with disabilities (Bricout & Bentley, 2000; Chi & Qu, 2008; Hand & Tryssenaar, 2006; Morgan & Alexander, 2005; Gilbride et al., 2000). For example, Chi and Qu noted that employers' favorable attitudes towards IWDs were significantly related to their prior positive working experience with workers with disabilities. In Morgan and Alexander's study, respondents who had hired IWDs were more likely to hire them again and reported advantages of hiring these individuals more frequently than respondents who had no experiences with individuals with intellectual disabilities. However, one study indicated that no relationship existed between having employed individuals with psychiatric disabilities and attitudes toward future hiring (Tsang et al., 2007). Finally, two studies (i.e., Gilbride et al.; Smith et al., 2004) surveyed employers who hired people with disabilities from vocational rehabilitation (VR) agencies or other supported employment programs. Both studies revealed positive employers' attitudes toward workers with disabilities.

Second, two studies investigated whether types of business or industries produced different findings. Hand and Tryssenaar (2006) found that employers from the public or social services reported greater willingness to hire individuals with psychiatric disabilities than other industrial areas. Morgan and Alexander (2005) suggested that

technical and technology industries seemed to be potential job placement for individuals with developmental disabilities.

In addition, two studies indicated that employers from large companies were more likely than small firms to hire IWDs (Houtenville & Kalargyrou, 2011; Morgan & Alexander, 2005). It seems that large companies were less concerned with the costs associated with additional training and supervision from employing IWDs.

### **Methodology of the Studies**

Thirteen of the 15 studies utilized quantitative research designs to investigate employers' attitudes toward IWDs. Study sample sizes ranged from 21 to 656 (see Table 2.2). Six (40%) studies had a sample size under 100, four (27%) had a sample size between 100 and 150, and five (33%) had a sample size above 200. Twelve studies reported response rates ranging from 6% to 78%; seven had response rates above 40%. Nine studies reported that they drew a random sample, but only three used samples that were both random and nationally representative (Houtenville & Kalargyrou, 2011; Olson et al., 2011; Smith et al., 2004). Response rates for national samples were much lower (e.g., 6% and 12.3%) than those for regional samples. Six studies utilized convenience/nonprobability samples.

### **Discussion**

The purpose of this review was to provide an update of recent research findings on employers' attitudes toward workers with disabilities. Some trends identified in prior reviews (Hernandez, Keys & Balcazar, 2000; Unger, 2002) were supported in the current review, while other trends were either different or diminished.

Table 2.2. Methodological characteristics.

Study	Design	Reliability & Validity	Sample size (Response Rate)	Sample Design	Data Analysis
Bricout & Bentley, 2000	Correlational	Reported	n=248 (24.8%)	Random sample	ANOVA
Gilbride et al., 2000	Cross-sectional	Not reported	n=123 (62%)	Convenience sample	Descriptive t-test
Olson et al., 2001	Cross-sectional	Reported	n=126 (6%)	Stratified random sample	Chi-square test
Greenan, Wu, & Black, 2002	Cross-sectional	Reported	n=190 (76%)	Random sample	Descriptive
Chi & Qu, 2008	Cross-sectional	Not reported	n=70 (14%)	Random sample	Regression
Smith et al., 2004	Cross-sectional	Not reported	n=656 (12.3%)	Convenience sample	ANOVA
Morgan & Alexander, 2005	Cross-sectional	Not reported	n=534 (49.4%)	Random sample	ANOVA
Hand & Tryssenaar, 2006	Cross-sectional	Not reported	n=58 (41%)	Random sample	t-test Regression
Bishop et al., 2007	Cross-sectional	Not reported	n=93 (78%)	Random sample	Rasch model analysis
Bryen, Potts, & Carey, 2007	Cross-sectional	Not reported	n=27 (17% and 39%)	Convenience sample	Descriptive
Tsang et al., 2007	Correlational	Reported	n=100 (40%)	Random sample	Chi-square test
Dalgin & Bellini, 2008	Quasi-experimental	Reported	n=60 (not reported)	Convenience sample	ANOVA
Hernandez, 2008	Qualitative	Not reported	n=21	Convenience sample	Descriptive
Hartnett et al., 2010	Qualitative	Not reported	n=387 (49.3%)	Convenience sample	Descriptive
Houtenville & Kalargyrou, 2012	Cross-sectional	Not reported	n=320 (not reported)	Stratified random sample	Descriptive

As indicated by prior reviews, employers who had previous experiences with workers with disabilities expressed favorable attitudes toward IWDs and were more willing to hire persons with disabilities, especially those who had positive experiences. Thus, it seems that direct experiences and contact with IWDs can reduce or eliminate potential bias and stereotypes of employers. VR and other employment support programs may also have some positive influence on employers' attitudes.

Types of disability may also affect employers' hiring decisions. Previous reviews identified a preferential hierarchy of disability types that employers tended to follow. Specifically, they were more likely to hire individuals with sensory or physical disabilities than individuals with intellectual or psychiatric disabilities. This finding was also supported by the current review (e.g., Bricout & Bentley, 2000; Dalgin & Bellini, 2008). However, studies on this subject usually asked respondents to make hiring decisions based on hypothetical scenarios of job applicants, who may or may not have knowledge about or experience with the specified disabilities.

Some inconsistencies emerged with regard to employers' concerns about workers with disabilities. More concerns were identified for individuals with certain disabilities (e.g., psychiatric disabilities and sensory impairment). Some of those concerns may be due to existing myths and misconceptions rather than employers' direct working experience (Unger, 2002). Compared to prior findings, employers generally identified less concerns but more perceived benefits, which can be a good indicator of employers' receptive attitudes toward workers with disabilities.

This study also identified a new trend that employers are increasingly recognizing that the costs associated with hiring IWDs (e.g., insurance and accommodations) are reasonable and negotiable. Many accommodations incur no or minimal costs. Employers indicated a willingness to accommodate workers with disabilities to gain more benefits than having to repeatedly hire and train new workers due to high turnover rates by workers without disabilities. It seems promising that employers recognize the benefits of hiring and accommodating workers with disabilities, so that they will comply with ADA provisions.

Several limitations of the studies examined in this review must be mentioned. First, most studies employed non-nationally representative samples (e.g., small sample size, convenience sample, and sample with geographical limitations), so generalization of the findings is somewhat limited. Further, some studies did not report the reliability and validity of their data. Survey responses may be associated with potential self-report bias and social-desirability bias. Therefore, the quality of studies in this area needs to be improved in order to draw consistent conclusions and findings that can be generalized.

### **Implications and Recommendations**

This review provides findings that are encouraging for individuals with disabilities who are looking for employment. Increasingly, employers are showing favorable attitudes as well as indicating a willingness to hire workers with disabilities. Employers identified advantages and benefits from hiring workers with disabilities based on their positive experience. These findings should be emphasized and publicized to help to clarify myths regarding hiring workers with disabilities.



Knowing that employers who do not have much experience with workers with disabilities are more likely to hold misconceptions and bias against certain types of disabilities and may have concerns about additional costs of hiring workers with disabilities, IWDs can be better prepared and skillfully deal with those misconceptions and bias during the recruitment and interview process. Individuals with disabilities will also need to impress employers with their desired qualities (e.g., punctuality and dependability). Further, based on these findings, VR professionals and other vocational support programs should bridge the relationships between employers and individuals with disabilities, such as answer employers' questions and address their concerns, disseminate examples of successful employment for individuals with disabilities, and provide employers with technical assistance in hiring and accommodating workers with disabilities.

Finally, most studies in this review used quantitative survey designs, which did not allow further in-depth inquiries into the rationale behind respondents' choices and ratings. Future studies need to employ more sophisticated designs, such as mixed method, which enhances the strength of the research, as well as the dimensions and generalization of the findings.

## CHAPTER III

EMPLOYABILITY SKILLS VALUED BY EMPLOYERS AS IMPORTANT  
FOR ENTRY-LEVEL EMPLOYEES WITH AND WITHOUT DISABILITIES\*

Employment is a major aspect of social integration. Research on the well-being of individuals with disabilities has revealed that employment is positively related to various dimensions of quality of life, including economic resources, job satisfaction, positive self-perception, active social network, recreational activities, and preferred living arrangements (Blackorby & Wagner, 1996; Butterworth & Gilmore, 2000; Stephens, Collins, & Dodder, 2005). Unfortunately, individuals with disabilities generally achieve poorer employment outcomes than the rest of the population. As a group, they encounter issues such as unemployment or underemployment, low wages, and a lack of support in the workplace (DeLeire, 2000; Yamaki & Fujiura, 2002). The Office of Disability Employment Policy (ODEP, 2009) reported an employment rate of only 19.8% for individuals with disabilities (IWD) aged 16 and over compared to 64.6% for individuals without disabilities. Not surprisingly, in 2008, the median household income for those without disabilities was about twice as high as it was for those with disabilities (Bjelland, Burkhauser, Schrader, & Houtenville, 2009).

The low rate of employment of individuals with disabilities may be attributed to a number of factors. One of the major obstacles is employers' concerns about, and

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misconceptions of, employing individuals with disabilities (Millington, Rosenthal, & Lott, 1998; Unger, 2002). Specifically, many employers doubt that individuals with disabilities have the necessary work-related skills and work-related personality attributes (Johnson, Greenwood, & Schriener, 1988). Further, in a study by Domzal, Houtenville, and Sharma (2008), employers who self-reported as not actively recruiting employees with disabilities cited a lack of employability skills and experience as the second major reasons for not hiring them. Indeed, inadequate work skills, poor attendance, abusive behaviors, refusing to accept instructions, punctuality, appearance, and safety have been associated with job loss for individuals with disabilities (Blanck, 1998; Chadsey & Beyer, 2001; Olson, Cioffi, Yovanoff, & Mank, 2001). Thus, employability skills are important for job search and retention and it is necessary for schools to provide relevant trainings to youths with disabilities (Bryen, Potts, & Carey, 2007; Guy, Sitlington, Larsen, & Frank, 2009).

“Employability skills” refer to general and nontechnical competencies required for performing all jobs, regardless of types or levels of jobs. They are not job specific, but are considered attributes of employees that make them an asset to employers (Buck & Barrick, 1987), and are “skills which cut horizontally across all industries and vertically across all jobs from entry level to chief executive officer” (Sherer & Eadie, 1987, p. 16).

Research has suggested that employability skills can be, and need to be, taught by schools so that students are better prepared for successful employment (Cotton, 2008; Poole & Zahn, 1993). It is particularly important to identify general employability skills

that employers expect from entry-level employees so that a variety of vocational preparation programs can incorporate them into their training.

Prior research has attempted to identify employability skills that employers expect all entry-level employees to possess. For example, Baxter and Young (1982) surveyed 96 employers and other stakeholders to identify skills and attitudes high school graduates needed to be employed. The most valued skills fell in areas of employee attitudes, communication, and basic knowledge. The highest rated attitudes were dependability, staying with a task, getting along with others, and recognizing the importance of good health. Hazler and Lotto (1987) surveyed 46 employers and found similar results. Attitudes (e.g., dependability, staying on task, getting along with other people) were also rated as most important, followed by general skills (e.g., reading, listening, speaking), with job-related skills (e.g., record-keeping) rated last. More recently, four organizations (i.e., the Conference Board, Corporate Voices for Working Families, the Partnership for 21st Century Skills, and the Society for Human Resource Management) conducted a survey of 231 employers to obtain their perspectives on basic knowledge and applied skills of new entry-level employees. The five skills rated as most important for high school graduates were professionalism or work ethic, teamwork or collaboration, oral communication, ethics or social responsibility, and reading comprehension (Casner-Lotto & Barrington, 2006).

However, little research has been done involving individuals with disabilities (i.e., individuals who received special education in school under the Individuals with Disabilities Education Act). The limited number of studies that involved this population

have tended to focus on employers' attitudes toward individuals with disabilities, aiming to identify employers' perspectives on benefits and concerns of employing them (Hernandez, Keys, & Balcazar, 2000; Mansour, 2009; Unger, 2002) rather than general employability skills.

A limited number of studies specifically examined employability skills that employers' expect of individuals with disabilities. Burton and Bero (1984) interviewed 25 employers in southern California to determine the skills they expected of employees with disabilities. Most interviewees mentioned interpersonal skills and social skills, such as dependability, accepting authority, getting along with people, and persistence. Similarly, Chamberlain (1988) surveyed 46 employers in San Diego County. Employers ranked four categories of employability skills for employees with severe disabilities from most to least important: work-related skills, personal attributes, communication, and social skills. The top five most important employability skills included getting along well with others, interest in the job, efficiency, dependability, and adaptability.

Another shortcoming is that very few studies compared employers' expectation of employability skills for employees *with* and *without* disabilities. Bricout and Bentely (2000) conducted a survey on employers' employability ratings of job applicants with and without disabilities. In particular, survey respondents were asked to rate applicants without disabilities, with acquired brain injury and with schizophrenia on 22 employment-related attributes from four categories, including personality, power, competence, and professionalism. They found nondisabled applicants were rated higher than applicants with a severe disability. There is a need to compare employers'

expectations for employees with and without disabilities because such comparisons may reveal potential discrepancies in the requirements of employability skills, which schools can then take into account when preparing students with disabilities for employment (Bricout & Bentley, 2000). Furthermore, existing research on employability skills has not investigated employers' perceptions within the context of their attributes, such as gender of respondents, types of industries, and company size. For example, the sector of a given business or industry can be a factor that affects employers' attitudes towards the employment of individuals with disabilities (Unger, 2002). Finally, most studies that have addressed employers' expectations of employability skills were conducted in 1980s and 1990s. However, the importance of entry-level employability skills may change over time due to the evolution of knowledge, technology, and globalization. Employability skills that were not perceived as important 10 or 20 years ago may be considered important in the 21<sup>st</sup> century. Therefore, a new study with a larger sample of today's employers is needed.

The purpose of this study was to identify employability skills that employers expect of entry-level employees with and without disabilities. The present study was designed to answer three research questions: (a) What are skill areas that employers consider as important for entry-level employees *with* and employees *without* disabilities? (b) What are specific employability skills that employers expect entry-level employees *with* and employees *without* disabilities to have? (c) Are there any differences between employers' expectations for employees with and employees without disabilities? If yes,

are the differences associated with employers' attributes (i.e., respondents' genders and types of business or industry)?

## **Method**

### **Participants**

Participants were recruited from a metropolitan area with a population of approximately 150,000 and its surrounding seven counties. A list of 950 businesses was obtained from the primary Chamber of Commerce in the area. Among the businesses, 625 had valid email addresses, which were used to send an email, along with instructions, to the head of these 625 businesses to invite them to go online to complete a survey.

The survey was conducted via the Qualtrics system, an online survey system managed by the university where the authors were employed. Responses to survey items were individually captured for each respondent and stored in an Excel data file. Four weeks after the first mailing, a second round of email invitation was sent to these businesses again to encourage participation.

A total of 188 individuals started the survey, reflecting a 30% participation rate. However, 20 of the forms were not complete and, therefore, were eliminated. As a result, a total of 168 (26.7%) participated in the study. Among respondents, 84 (50%) were males and 84 (50%) females; 148 (88%) were Caucasian, and the rest were African American or belonged to other races. Their job titles included manager, CEO, director, president, owner, and so on. Nineteen (11.3%) employers indicated having worked at their current position for 0-5 years, 34 (20.2%) for 6-10 years, 48 (28.6%) for 11-20 years, and 67 (39.9%) for more than 20 years. Ninety-four (56%) employers worked in

a company with fewer than 50 employees, 20 (11.9%) in a company with 50 to 100 employees, and 54 (32.1%) in a company with more than 100 employees.

### **Instrument**

A researcher-developed survey instrument was used. Survey items were generated based on a review of previous studies, published topical reports, and current school practice. An electronic search was conducted by using the following databases: Educational Resources Information Center (ERIC), Vocational & Career Collection (EBSCO), and PsycINFO (CSA). Search terms included “employability”, “employability skills”, “job skills”, “vocational skills”, “employer”, “attitude”, “expectation”, “satisfaction”, “handicapped” and “disability”. Skills drawn from identified literature were added to the draft instrument, which was later reviewed by selected transition educators and specialists. The final instrument consisted of two sections. Section I contained 36 items which represented 36 specific skills or attributes. These 36 items were further divided into five categories, each of which represented a specific skill or attribute area (construct) that is potentially important for an entry-level employee. Respondents were asked to rate the importance of each skill on a 4-point Likert scale for employees with and without disabilities, separately. The five skills or attribute areas consisted of basic skills (8 items), higher-order thinking skills (4 items), personal management skills (11 items), interpersonal skills (6 items), and personal attributes (7 items). The four choices included “not important,” “somewhat important,” “very important,” and “extremely important.” Section II consisted of items that



collected demographic information on respondents' gender, type of industry, educational levels, and years of experiences.

### **Data Analysis**

The Excel file generated from the Qualtrics system was converted to an SPSS file. Before any analysis was conducted, the data file was screened for incomplete or missing data. As a result of the screening, the 20 incomplete cases were deleted and 2 cases with some missing values were dealt with using the conventional data imputation method of substituting means for missing values (Hertel, 1976). This resulted in a final sample of 168 cases. For the purpose of data analysis, the variable labeled "types of industries," which originally included 16 types, was re-coded into two types. Specifically, eight types were coded as Science/Technology ( $n = 61, 37\%$ ). These included agriculture, food, & natural resources; architecture & construction; arts, audio/video technology, & communications; health science; information technology; manufacturing; science, technology, engineering, & mathematics; and transportation, distribution, & logistics. The remaining eight types were recoded as Service/Business ( $n = 107, 63\%$ ). These included business, management, & administration; education & training; finance; government & public administration; hospitality & tourism; human services; law, public safety, corrections, & security; and marketing, sales, & service. The reason for this classification of two types of industries was that we were interested in examining differences between those companies that were in the science/technology fields versus those in the service/business fields. We believed that because employers in these two fields had distinctly different training and engaged in distinctly different work (one on

production and the other on services), their perceptions and tolerance levels might be significantly different. Similarly, we felt that females might be more caring and tolerant than males and might have answered the survey differently. So, we decided to compare the difference between males and females. The variable of gender was dummy-coded for this comparison. On the other hand, age and ethnicity were not of interest to us in this study because we did not feel that age and ethnicity of the respondents would significantly affect their perceptions about employability skills.

As indicated, the 36 items in Section I of the instrument were categorized into five areas (constructs) based on prior research. To further confirm the constructs, factor analyses were conducted to examine whether items in each construct measured similar skills and belonged to the same category. Specifically, we used the cross-validation approach to examine the robustness of factor structures (Thompson, 2004) in four steps (a) randomly splitting data for the individuals *with* disabilities group into two halves, (b) analyzing the first-half data with exploratory factor analysis (EFA) to determine the factor structure, (c) using confirmatory factor analysis (CFA) to cross-validate the factor structure with the second-half of the data, and (d) using CFA to cross-validate the same factor structure with the individuals *without* disabilities group.

The EFAs were computed in SPSS (Version 17.0) using the principal components analysis with Varimax rotation methods. The factor extraction was based on the Scree plots. Of all 36 items, only items with factor loadings larger than .45 on a construct were selected. Five items were excluded from the analysis according to this criterion. As a result, 31 items were kept and divided into five constructs: basic skills (4

items), higher-order thinking skills (9 items), social skills (6 items), basic work skills (7 items), and personal traits (5 items). All the CFAs were conducted following the EFA by using Mplus (Muthén & Muthén, 2004) to confirm the five constructs for the individuals *with* disabilities group and individuals *without* disabilities group.

Table 3.1 lists model fit indices on all five constructs for both groups. All the model fit indices suggest a fair to good fit, confirming the constructs. Table 3.2 provides the final items of the five constructs as well as the excluded items. Internal consistency reliability was examined for each construct and measured by Cronbach's alpha (see Table 3.2). Means and standard deviations of each survey item are also provided in Table 3.2.

After the constructs had been validated, a mean score across all items was calculated for each construct and used as the composite score for the construct. Two different analyses were subsequently conducted. First, average ratings on each construct for employees *with* disabilities and employees *without* disabilities were graphed, and descriptive statistics were calculated. The purpose of this analysis was to compare average rating scores among all the constructs within each group. Second, a repeated-measure multivariate analysis of variance (MANOVA) was conducted on each construct to examine whether the average ratings were different for employees *with* disabilities group versus employees *without* disabilities. The repeated-measure MANOVAs were performed because each respondent was measured multiple times, and there were multiple dependent variables (George & Mallery, 2008). The multivariate test is considered to be far more powerful than any other analysis approach, or even the most

Table 3.1. Model fit indices for CFA.

Constructs	With-Disability Group				Without-Disability Group			
	Chi-Square (df)	CFI	RMSEA	SRMR	Chi-Square (df)	CFI	RMSEA	SRMR
Basic Skills	.004(1)	1.00	0.00	0.00	.26(1)	1.00	0.00	.01
Higher Order Thinking Skills	31.47(23)	.97	.07	.06	43.32(25)	.96	.09	.05
Basic Work Skills	12.71(11)	.99	.04	.03	13.43(11)	.99	.05	.03
Social Skills	8.15(7)	.99	.04	.04	8.39(8)	1.00	.02	.03
Personal Traits	4.68(3)	.99	.08	.02	8.36(4)	.98	.11	.03

*Note:* CFA = confirmatory factor analysis; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual.

Table 3.2. Finalized items of the five constructs and excluded items.

Scales	Description	Means ( <i>SDs</i> )		Reliability ( $\alpha$ )	
		D	ND	D	ND
Basic Skills	Ability to read with understanding	3.51 (.73)	3.59 (.70)	.77	.71
	Ability to listen actively	3.48 (.59)	3.58 (.53)		
	Ability to speak so others can understand	3.46 (.66)	3.57 (.60)		
	Ability to convey ideas in writing	3.00 (.83)	3.09 (.82)		
Higher Order Thinking Skills	Ability to recognize and correct own mistakes	3.12 (.69)	3.21 (.66)	.90	.90
	Ability to use critical thinking	2.95 (.78)	3.08 (.73)		
	Ability to apply basic math	2.90 (.84)	3.01 (.84)		
	Ability to solve problems	2.89 (.73)	3.00 (.68)		
	Ability to negotiate and resolve conflict	2.85 (.79)	2.94 (.78)		
	Ability to apply basic computer/technology skills	2.83 (.88)	2.92 (.88)		
	Ability to make plans and work towards goals	2.80 (.79)	2.90 (.80)		
	Ability to advocate for self	2.71 (.78)	2.79 (.80)		
Ability to use creative thinking	2.67 (.79)	2.78 (.79)			
Basic Work Skills	Ability to be on time	3.55 (.59)	3.61 (.53)	.87	.83
	Ability to seek help when needed	3.50 (.62)	3.54 (.58)		
	Ability to follow schedules	3.46 (.62)	3.51 (.58)		
	Ability to cooperate with others and be a good team player	3.40 (.66)	3.44 (.63)		
	Ability to stay with a task until finished	3.37 (.62)	3.43 (.60)		
	Ability to work well with people from diverse backgrounds	3.32 (.75)	3.37 (.71)		
	Ability to monitor quality of work	3.20 (.71)	3.29 (.67)		
Social Skills	Ability to show respect for others	3.62 (.58)	3.66 (.53)	.86	.84
	Ability to use socially acceptable language	3.44 (.70)	3.51 (.62)		
	Ability to accept authority	3.37 (.74)	3.42 (.71)		
	Ability to maintain appropriate personal appearance (e.g., grooming, hygiene, and clothing)	3.25 (.72)	3.32 (.67)		
	Ability to accept criticism	3.13 (.70)	3.20 (.66)		
	Ability to control self and work without direct supervision	3.13 (.79)	3.26 (.75)		
Personal Traits	Demonstrating personal integrity/honesty in work	3.73 (.52)	3.77 (.45)	.85	.84
	Demonstrating responsibility in work	3.40 (.62)	3.44 (.59)		
	Demonstrating ability to adapt to change	3.14 (.69)	3.18 (.66)		
	Demonstrating motivation towards work	3.07 (.65)	3.13 (.63)		
	Demonstrating personal interest in work	3.00 (.69)	3.05 (.68)		
Excluded Items	Ability to follow instructions	3.70 (.52)	3.76 (.46)		
	Ability to show high regard for safety procedures	3.52 (.67)	3.56 (.65)		
	Ability to learn new skills	3.37 (.64)	3.44 (.63)		
	Demonstrating initiative in work	3.10 (.72)	3.17 (.68)		
	Demonstrating confidence in work	2.94 (.70)	2.99 (.69)		

Note: D = Disabled; ND = Nondisabled.

powerful (Davidson, 1972; O'Brien & Kaiser, 1985). Specifically, the present study employed the repeated-measures design of “two between and one within factors” (Stevens, 2009, p. 440). The within-factor consisted of each construct for employees *with* disabilities and employees *without* disabilities. The two between-group variables were gender and types of industries (i.e., Science/Technology and Service/Business). An advantage of this design was that it allowed for simultaneous interpretations regarding whether there was any difference on ratings for employees *with* disabilities and employees *without* disabilities and whether the differences were associated with the respondents' gender and/or the type of industry.

## **Results**

### **Employability Skills Perceived as Important for Employees *With* Disabilities and Employees *Without* Disabilities**

**The top five skills.** As shown in Table 3.2, the five employability skills with the highest means for employees *with* disabilities were “demonstrating personal integrity/honesty in work” ( $M = 3.73, SD = .52$ ), “ability to follow instructions” ( $M = 3.70, SD = .52$ ), “ability to show respect for others” ( $M = 3.62, SD = .58$ ), “ability to be on time” ( $M = 3.55, SD = .59$ ), and “ability to show high regard for safety procedures” ( $M = 3.52, SD = .67$ ). For employees *without* disabilities, the five highest means are the same, except for the last item, which for individuals without disabilities was “ability to read with understanding” ( $M = 3.59, SD = .70$ ).

**Comparisons among employability skill areas (constructs).** The descriptive statistics and the zero-order correlations (based on the composite scores) for the five

constructs for both groups are presented in Table 3.3. As shown, the means of all five constructs for the employees *without* disabilities group are higher than those for the employees *with* disabilities group. Figure 3.1 presents graphical comparisons of the five constructs between employees *with* disabilities and employees *without* disabilities. Two trends can be observed in Figure 3.1. First, the five constructs are ranked in the same order for both groups; from the highest to lowest means are basic skills, basic work skills, social skills, personal traits, and higher-order thinking skills. This indicates that there is a set of generic skills that employers consider as fundamental for both employees *with* disabilities and employees *without* disabilities. Second, within each construct, the ratings for employees *without* disabilities were higher than the ratings for employees *with* disabilities, which indicates that employers may have higher expectations for employees *without* disabilities than for employees *with* disabilities, which needs to be further confirmed by the following multivariate tests.

### **Discrepancies Between Employer Expectations of Employees *With* Disabilities and Employees *Without* Disabilities**

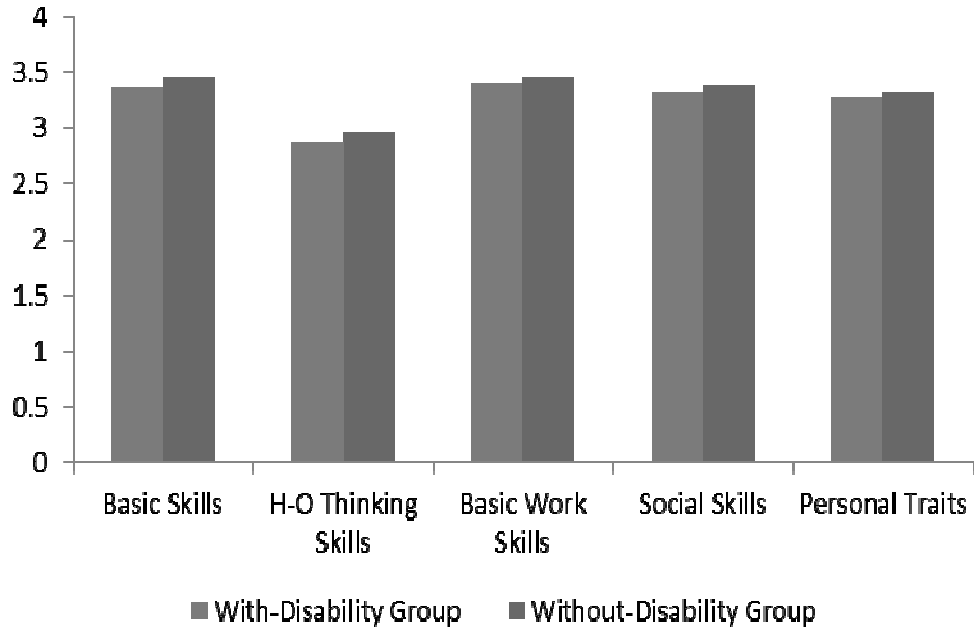
**Basic skills.** The first repeated-measure MANOVA examined whether the employers' expectations of basic skills differed for employees *with* disabilities and employees *without* disabilities, and whether the differences were related to respondents' gender and/or types of industries. The results revealed one significant main effect for disability status,  $F = 14.396$ ,  $p < .001$ , effect size  $r = .284$ , observed power = .965, which means that ratings for employees *with* disabilities and employees *without* disabilities

*Table 3.3.* Means, standard deviations, and correlations of the five constructs for four groups.

Participant	Constructs	With-Disability Group					Without-Disability Group				
		1	2	3	4	5	1	2	3	4	5
Educator	Basic Skills	–	.68*	.32*	.24*	.37*	–	.62*	.38*	.38*	.45*
	Higher-Order Thinking Skills		–	.47*	.23*	.59*		–	.49*	.38*	.60*
	Basic Work Skills			–	.69*	.59*			–	.82*	.65*
	Social Skills				–	.48*				–	.63*
	Personal Traits					–					–
	Means	2.95	2.51	3.40	3.52	3.06	3.42	3.06	3.65	3.68	3.34
	SDs	.58	.65	.44	.41	.52	.44	.51	.40	.40	.45
Employer	Basic Skills	–	.65*	.50*	.52*	.53*	–	.63*	.48*	.51*	.51*
	Higher-Order Thinking Skills		–	.63*	.56*	.65*		–	.62*	.55*	.64*
	Basic Work Skills			–	.81*	.73*			–	.78*	.68*
	Social Skills				–	.71*				–	.67*
	Personal Traits					–					–
	Means	3.36	2.88	3.40	3.36	3.27	3.46	2.98	3.46	3.42	3.32
	SDs	.55	.60	.48	.54	.51	.49	.58	.43	.50	.47

*Note:*  $N = 168$ ; \* $p < .01$  (2-tailed).





*Figure 3.1.* Means of employability skills for groups with/without disabilities.

were significantly different (mean difference = 0.11,  $p < .001$ ). No main effects were found for gender or types of industry.

**Higher-order thinking skills.** The repeated-measure MANOVA on higher-order thinking skills revealed a significant main effect for disability status,  $F = 14.788$ ,  $p < .001$ , effect size  $r = .288$ , observed power = .969, which means that there was a significant difference between ratings for employees *with* disabilities and employees *without* disabilities (mean difference = 0.09,  $p < .001$ ).

The test of between-subject effect also revealed a main effect for type of industries,  $F = 7.360$ ,  $p < .01$ , effect size  $r = .207$ , observed power = .769, which suggests a significant difference on ratings between respondents from the two the types of industries: Science/Technology and Service/Business (mean difference = -0.234,  $p < .01$ ). Respondents from Service/Business had higher expectations for higher-order thinking skills than employers from Science/Technology. The test of gender effect revealed no significant difference.

**Basic work skills.** Multivariate statistics from the repeated-measure MANOVA for basic work skills revealed a significant main effect for disability status,  $F = 7.849$ ,  $p < .01$ , effect size  $r = .214$ , observed power = .796, and a significant interaction effect for disability status and gender,  $F = 8.825$ ,  $p < .01$ , effect size  $r = .166$ , observed power = .574. The ratings on basic work skills were different for employees *with* disabilities and employees *without* disabilities (mean difference = 0.06,  $p < .01$ ). Female respondents held higher expectations than male respondents for both employees *with* disabilities and employees *without* disabilities to have basic work skills. The test of

between-subject effect also revealed a main effect for gender,  $F = 8.825$ ,  $p < .01$ , effect size  $r = .226$ , observed power = .840, which also indicated that female respondents had higher expectations for employees to possess basic work skills than their male counterparts (mean difference = .201,  $p < .01$ ).

**Social skills.** For social skills, there was one significant main effect on disability status,  $F = 10.588$ ,  $p = .001$ , effect size  $r = .246$ , observed power = .899, and a significant interaction effect between disability status and gender,  $F = 5.291$ , effect size  $r = .177$ , observed power = .628. Thus, respondents' ratings on social skills differed for employees *with* disabilities and employees *without* disabilities (mean difference = .07,  $p < .01$ ). For both groups, female respondents had higher expectations for social skills than their male counterparts. The test of between-subject effect revealed a significant main effect for gender,  $F = 22.535$ ,  $p < .001$ , effect size  $r = .348$ , observed power = .997, a significant main effect on types for industries,  $F = 7.028$ ,  $p < .01$ , effect size  $r = .203$ , observed power = .750, and a significant interaction effect between gender and types of industries,  $F = 4.748$ ,  $p < .05$ , effect size  $r = .168$ , observed power = .582. These indicate that female employers had higher expectations for social skills than male employers (mean difference = .348,  $p < .001$ ), and those from Service/Business valued social skills more than those from Science/Technology. The same trend existed among female respondents from both types of industries; that is, they all had higher expectations than males for all employees to have social skills, while males from Service/Business valued social skills more than those from Science/Technology.

**Personal traits.** The final repeated-measure MANOVA was performed on personal traits. A significant main effect was found for disability status,  $F = 5.688$ ,  $p < .05$ , effect size  $r = .183$ , observed power = .659, which means that the ratings of importance of personal traits were different for employees *with* disabilities and employees *without* disabilities (mean difference = .05,  $p < .05$ ). Two significant between-subject effects were also found, including a main effect on gender,  $F = 4.674$ ,  $p < .05$ , effect size  $r = .166$ , observed power = .575, and a main effect on types of industries,  $F = 4.429$ ,  $p < .05$ , effect size  $r = .162$ , observed power = .553. These results indicated that for all employees, female respondents valued personal traits more than males (mean difference = .159,  $p < .05$ ), and participants from Service/Business rated personal traits higher than those from Science/Technology (mean difference = .155,  $p < .05$ ).

### Discussion

The purpose of this study was to identify employability skills that employers value as important for entry-level employees *with* disabilities and employees *without* disabilities. One finding indicates that the same four skills were viewed as most important for both groups, including “demonstrating personal integrity/honesty in work,” “ability to follow instructions,” “ability to show respect for others,” and “ability to be on time.” Apparently, employers consider some employability skills as essential for all entry-level employees regardless of whether an employee has a disability or not. Demonstrating adequate personal integrity and honesty is most important, even more so than some specific job skills. This is consistent with findings of some previous studies

(e.g., Baxter & Young, 1982; Buck & Barrick, 1987; McCrea, 1991), which also identified general employability skills such as dependability, attendance, and following instructions as top skills that employers considered most important for employees *with* disabilities. All these top-rated skills are fundamental personal attributes rather than specific-job skills such as computing skills.

Based on comparisons among the five skill areas, respondents ranked skill areas in the same order of importance for both employees *with* disabilities and employees *without* disabilities. The most important area was basic skills, followed by basic work skills, social skills, personal traits, and higher-order thinking skills. This finding further confirms the results of previous research (e.g., Baxter & Young, 1982; Murphy & Jenks, 1983; Poole & Zahn, 1993) that basic skills (e.g., reading, writing, and communicating) are consistently viewed as most important by employers.

However, some noticeable differences were found between employers' expectations for employees *with* disabilities and employees *without* disabilities. First, a difference emerged between the two groups in terms of the fifth important skill. For employees *with* disabilities, it was the "ability to show high regard for safety procedures," whereas for employees *without* disabilities, it was the "ability to read with understanding." It seemed that employees were more concerned with the safety of employees *with* disabilities, which may indicate a misconception that all people with disabilities have safety problems due to their physical or mental conditions.

If not adequately addressed, this misconception could lead to fears and negative expectations toward hiring individuals with disabilities. For example, some employers

may be afraid that an employee with a disability will require too much supervision, accommodations, or additional job training (Siperstein, Romano, Mohler, & Parker, 2006). However, this fear is not warranted because most employers who have direct experience with employees *with* disabilities have positive experiences with and attitudes towards hiring individuals with disabilities (Levy, Jessop, Rimmerman, & Levy, 1992). Employers' differential expectations for being able to read with understanding seem to indicate their low or negative expectations for individuals with disabilities to be able to read. This misconception often impedes opportunities for those with disabilities to be hired to perform higher-level tasks or be promoted to higher-level jobs.

Second, employers expected more skills from employees *without* disabilities than from those *with* disabilities in all of the five skill areas, with the largest discrepancy being in the area of basic skills, followed by high-order thinking skills, basic work skills, social skills, and personal traits. Results of the repeated MANOVA tests indicated that the differential expectations were statistically significant for all five areas. Employers' higher expectations for employees *without* disabilities may be justifiable given the discrepancies between the post-school outcomes of individuals *with* disabilities and individuals *without* disabilities (Chambers, Rabren, & Dunn, 2009). However, employers must be informed about individual differences and the need to avoid stereotypical hiring practices because some individuals with disabilities are more capable of performing higher-order jobs.

When examining the differences within the context of respondents' gender and type of industry, it was found that respondents from Service/Business areas had

significantly higher expectations than those from Science/Technology areas for their employees to have higher-order thinking skills, social skills, and personal traits, whereas no significant difference existed on basic skills and basic work skills. Clearly, employers in Service/Business areas valued skills needed for adequate interactions with others (e.g., consumers, clients, coworkers). It was interesting to find that female respondents tended to have higher expectations than male respondents for their employees to have better skills in the areas of basic work skills, social skills, and personal traits. However, it is not clear why female employers value these skills more than male employers. One assumption is that female employers may be overrepresented in certain types of businesses that value these skills more than other types of businesses and, therefore, value these skills more than male employers. It is worth mentioning that because the alpha level was set at the .05 level in our analyses, there was a probability for Type II errors to occur, which means that these differences could be not statistically significant. However, the likelihood of a Type II error is small, but recognizing the difference may make a difference from a practical standpoint.

### **Limitations of the Study**

There were several limitations to the current study. The first is associated with the sample and data collection. Specifically, data were collected based on respondents' self-report, and some respondents may have provided "politically correct" answers rather than reporting what they truly believed and did. Further, respondents were from a small area in a southern state and, therefore, might not represent the nation. Participation in the study was voluntary, and those who chose to respond might represent a group of

employers who had better awareness of disability issues than those who did not respond. Because of these limitations, generalizations of study results should be considered with caution.

Second, the nature of survey studies and the inherent limitations associated with them apply to this study. In particular, we were not able to follow up with respondents to find out why they valued certain skills and in what circumstances. Future research is needed to conduct in-depth interviews with employers about what they know about individuals with disabilities and why certain skills are or are not important for employees with disabilities compared to employers without disabilities.

Third, educators were not included in the study, and no comparisons were conducted to examine similarities and differences between the perspectives of employers and educators. Educators hold the key to employability skills training. If their perspective does not align with that of employers, the career preparation that students with disabilities receive may be off target. Therefore, future research is needed to compare the perspectives of educators and employers. Findings from such study can be used to inform educators so that they can change perspectives and provide appropriate skills to individuals with disabilities.

### **Implications for Practice**

Knowing employers' expectations for specific employability skills, educators and VR professionals can incorporate these skills into their training programs. Most employers place the responsibility for workforce readiness on educational institutions and new entrants (Casner-Lotto & Barrington, 2006). Schools and VR need to align



their job development practices with employers' needs and teach individuals with disabilities to focus on employers' needs when seeking jobs (Luecking, 2008).

Furthermore, it is essential for individuals with disabilities to build up and be able to demonstrate these qualities/skills to employers.

Because employers valued certain personal attributes and nonspecific job skills over technical skills, such as integrity/honesty, following instructions, showing respect for others, and being on time, prevocational and vocational training curricula should emphasize these positive work attitudes, habits, and social skills (DeMario, 1992). In particular, high schools need to reform their employment preparation programs to put more emphasis on basic skills (reading, writing, and communicating) because employers clearly value basic literacy skills and related academic skills. Unfortunately, a majority of current high school employment preparation programs focus on teaching technical skills (54.8%), job awareness and exploration (28%), with only 18.5% focusing on general employability skills training in English and math (Guy, Sitlington, Larsen, & Frank, 2009). Further, many schools stress technical skill training and attenuate academic skill training for individuals with disabilities.

The findings from this study should serve as a reminder to schools that basic academic skills are most valued by employers. Schools should always emphasize training in basic literacy skills, as well as math skills and communication skills, and provide students with adequate instruction.

The study found discrepancies between employers' expectations for employees *with* disabilities and employees *without* disabilities, which indicate potential

misconceptions about and bias towards hiring individuals with disabilities. Lower expectations could be associated with lower pay and benefits, lower-level tasks and job positions. In reality, many studies have revealed that employees with disabilities have average or above-average performance, safety records, and attendance based on employers' ratings (Blanck, 1998; Unger, 2002; Smith, Webber, Graffam, & Wilson, 2004).

In order to eliminate or diminish potential negative expectations towards individuals with disabilities, vocational counselors and vocational rehabilitation agencies should proactively respond to employer concerns by building effective business-rehabilitation partnerships (Unger, 2007), facilitating demand-side job development (Luecking, 2008), increasing contact with employers, and advocating for individuals with disabilities. Gilbride, Stensrud, Ehlers, Evans, and Peterson (2000) suggested VR agencies develop a systematic approach to managing relationships with employers. Employers who are frequently contacted are more likely to hire individuals with disabilities than other employers (Vandergoot, 1987). Individuals with disabilities also need training in self-advocacy, job application, and interview skills so that they can demonstrate their potential and convince employers they have adequate skills for the desired position.

In addition, this study found respondents from Service/Business areas have higher expectations than those from Science/Technology areas for their employees to have higher-order thinking skills, social skills, and personal traits. This means that schools must teach more of these skills to students if they plan to work in

Service/Business industries. This finding has direct implication for the transition planning process when students work with their families and support staff to develop their postsecondary employment goals. This goal needs to be specific enough so that appropriate instruction can be provided to the student to prepare them for the industry in which they are likely to acquire employment. Schools also need to provide training to students about the job application and interview process so they learn how to highlight their skills depending on where they apply for a job and who interviews them.

CHAPTER IV  
EMPLOYABILITY SKILLS FOR ENTRY-LEVEL EMPLOYEES WITH AND  
WITHOUT DISABILITIES: A COMPARISON BETWEEN THE PERSPECTIVES OF  
EDUCATORS AND EMPLOYERS

Since the early 1980s, a focus on the transition from school to work has become one of the top priorities for students with disabilities to access higher quality postschool lives (Halpem, 1992; Phelps & Hanley-Maxwell, 1997; Rush & Phelps, 1987).

Employment is widely recognized as a pivotal component in transition services (Halpem, 1985; Landmark, Ju, & Zhang, 2010; Will, 1984). Thus, the most recent reauthorization of the Individuals with Disabilities Act (IDEA, 1990) (i.e., Individuals with Disabilities Education Improvement Act, 2004) requires public schools to support students with disabilities in setting and achieving postschool goals in the area of employment by providing an array of activities aimed at increasing their employability.

Despite the long-term focus on promoting employment outcomes for individuals with disabilities, a significant gap remains between their employment rates and those of individuals without disabilities. For example, according to the results of the Current Population Survey (CPS) (Office of Disability Employment Policy, 2010), the employment rate for individuals with disabilities was 18.6%, considerably lower than the 63.5% rate for persons without disabilities. Further, the National Longitudinal Transition Study-2 (NLTS-2) showed little improvement in the postschool employment rate of former special education students in 2005 compared to 1990 (62.2% vs. 56.3%) (Wagner, Newman, Cameto, & Levine, 2005).

Considering these disappointing outcomes of current efforts, schools are encouraged to develop and improve employment programs for youth with disabilities (Brown, Berkell, & Schmelkin, 1992; Szymanski & Parker, 2003). One key element in employment preparation programs is to teach employability skills because they are a prerequisite for job readiness and highly valued by employers over job-specific and technical skills; indeed, employers demand public schools teach those skills (Cotton, 2008).

Employability skills refer to generic skills, competencies, knowledge, and personal attributes that enable a person to pursue career success at all levels and types of employment (Buck & Barrick, 1987; Overtoom, 2000; Sherer & Eadie, 1987). These skills are not job specific or technical, but are fundamental to fulfilling all jobs.

A report from the Secretary's Commission on Achieving Necessary Skills (SCANS) (Secretary's Commission on Achieving Necessary Skills, 1991) identified three foundation skills for all workers, including basic skills (e.g., reading, writing, mathematics, listening and speaking); higher order thinking skills (e.g., creative thinking, decision making, problem solving, visualization, knowing how to learn, and reasoning); and personal qualities (e.g., responsibility, self-esteem, sociability, self-management and integrity). While students with disabilities are expected to have sufficient employability skills to obtain and maintain jobs after high school (Smith & Katz, 2005), SCANS revealed that more than 50% students do not have adequate employability skills, leading to the question: Do skill instruction provided by schools match the demands of the workplace?

To remedy the situation, it is recommended that schools be connected with employers/business to collaboratively promote employment outcomes (McLoughlin, 2002; Wehman, 2011). Employers play a critical role in addressing the issues of low employment rates and job loss by individuals with disabilities (Unger, 2002). However, many employers have concerns about whether individuals with disabilities are capable of working and whether they have adequate employability skills (Domzal & Houtenville, 2008; Johnson, Greenwood, & Schriener, 1988). For example, Kaye, Jans, and Jones (2011) surveyed 463 employers and found that more than 60% agreed or strongly agreed with the statement that individuals with disabilities cannot perform basic functions of the jobs.

To better prepare students to meet workforce demands, it is necessary to understand what kind of employability skills employers expect from job applicants (Wehman, 2011). At the same time, educators' perceptions of valued employability skills are also important because they are the ones who implement the curriculum, provide daily instruction, and plan and coordinate transition services (Harvey, Cotton, & Koch, 2005; Trainor, Carter, Owens, & Swedeen, 2008).

Knowing the perceptions of both employers and educators about valued employability skills helps schools to understand the needs of employers, the gap between educators and employers, and changes needed to align employment preparation programs with employers' expectations. Unfortunately, little research has been conducted in the past decade to compare the perceptions of educators and employers. Among existing studies, McCrea (1991) asked 87 special educators and 100 employers

to rate the importance of 25 employability skills in four categories (i.e., work-related, social, communication, and personal). Although both parties rated work-related category as the most important for job success, some discrepancies in perceptions were found. Specifically, for specific employability skills, employers considered reading and writing, understanding work routines, and following instructions as important whereas educators put more value on such skills as correcting mistakes, communication, and having an appropriate attitude.

Two studies conducted in the 1980s investigated employers' expectations on important employability skills for individuals with disabilities and found that work-related skills, personal attributes, and social skills were valued more than others (Burton & Bero, 1984; Chamberlain, 1988). However, neither study investigated educators' perceptions on employability skills.

In the current era of economic globalization, the workplace and its requirements continue to evolve rapidly. For today's workforce, what employability skills do employers consider critical for job success? What skills do educators view as important? Are there discrepancies between the perceptions of these two groups as there were in the 1990s (e.g., McCrea, 1991).

The purpose of this study was to answer these questions. Specifically, we investigated both educators' and employers' perspectives on general employability skills for individuals with and without disabilities. The specific research questions were as follows: (a) What are important employability skills as perceived by special educators and employers? (b) Are there discrepancies between the perspectives of special

educators and employers? If yes, what are the differences? (c) Do educators and employers differ in their perceptions of individuals with disabilities vs. those without disabilities?

## **Method**

### **Participants**

Two groups of people were invited to participate in a survey: employers and educators. The survey was administered in two formats: online and traditional paper questionnaires. A total of 283 individuals participated in the study by completing the survey, including 115 (40.6%) educators, with a 46.7% response rate, and 168 (59.4%) employers, with a 26.7% response rate. Respondents consist of 117 (41.3%) males and 166 (58.7%) females; 236 (83.4%) were Caucasians, 19 (6.7%) were Hispanic, 11 (3.9%) were African American, 10 (3.5%) belonged to other races, and 7 were of unknown ethnic/racial background.

**Employers.** Employers were recruited from a small metropolitan area and seven surrounding counties through email invitations. Contact information was obtained from the primary Chamber of Commerce in the area. Emails were sent to 625 businesses inviting them to participate. Four weeks later, a second round of email invitations was sent to businesses that had not yet responded.

For the final pool of 168 employers, job titles included CEO, manager, director, president, and owner. Respondents had worked in various industries such as marketing, sales and service, health science, finance, architecture and construction, and so on. Fifty-three (31.5%) participants reported that they had worked at their current position for 0 to



10 years, 48 (28.6%) for 11 to 20 years, and 67 (39.9%) for more than 20 years.

Company sizes ranged from fewer than 50 employees 94 (56%) to 50 to 100 employees 20 (11.9%), and more than 100 employees 54 (32.1%) (Ju, Zhang, & Pacha, 2012).

**Educators.** Educators were recruited in two ways: through email invitation to the LISTSERV of interest groups and personal survey delivery. Interest groups on the LISTSERV included inservice special educators pursuing continuing education at the university where the authors were employed and teachers who were teaching in the counties where the employers were recruited. A total of 146 email invitations were sent out; 75 educators (51.4%) completed the online survey. In addition, paper surveys (i.e., printed version of the online survey) were distributed to 100 teachers in a local school district with 40 (40%) completing the paper survey. As a result, a total of 115 educators participated in the survey, for a 46.7% response rate. Respondents included general education teachers (46; 40%), special education teachers (38; 33%), school administrators (15; 13%), and others (16; 14%; e.g., vocational teacher, diagnostician, and school counselor). Length of respondents' work experiences ranged from less than five years (30; 26%) to 6-10 years (20; 17%), 11-20 years (32; 28%), and more than 20 years (33; 29%).

### **Survey Instrument**

A researcher-developed survey was used to gather demographic information and participants' perceptions on valued employability skills for entry-level employees with and without disabilities. The instrument was designed based on a review of previous studies, published topical reports, and school practice (Ju, Zhang, & Pacha, 2012).

The survey consists of two parts. Part I contains 36 items representing 36 specific employability skills or personal attributes that are potentially important for an entry-level employee. The 36 items are divided into 5 skill or attribute areas, including basic skills (8 items), higher-order thinking skills (4 items), personal management skills (11 items), interpersonal skills (6 items), and personal attributes (7 items). Respondents were asked to rate the importance of each skill/attribute on a 4-point Likert scale (i.e., “not important,” “somewhat important,” “very important,” and “extremely important”) for both employees with and without disabilities. Part II was designed to gather demographic information (e.g., title, gender, ethnicity, etc.) for both employers and educators.

### **Data Analysis**

Data gathered via the survey were converted to an SPSS file and grouped into four categories: Educators’ expectations for individuals with disabilities, educators’ expectation for individuals without disabilities, employers’ expectation for individuals with disabilities, and employers’ expectations for individuals without disabilities. As an initial analysis, confirmatory factor analysis (CFA) was used to validate factor structures of 36 employability skills. The factor structures were based on a prior study (Ju, Zhang, & Pacha, 2012), which yielded five constructs: basic skills, higher-order thinking skills, basic work skills, social skills and personal traits. All the CFAs were conducted by using Mplus (Muthén & Muthén, 2007) for both educators’ and employers’ attitudes towards individuals with and without disabilities. Missing data were dealt with using Mplus by the full information maximum likelihood (FIML) approach.

The final factor structures for all four categories of the data were mostly consistent with the prior study. Only two items were eliminated from previous constructs due to poor fit for the latent factors. These two items were “ability to advocate for self” and “ability to control self and work without direct supervision” (see Table 4.1). Descriptive statistics for each survey item were calculated and Cronbach’s alpha was calculated to measure internal consistency reliability (see Table 4.1). All reliability scores indicated acceptable to excellent internal consistency for each construct (Cronbach, 1951).

To compare the ratings of the five constructs among the four categories, composite scores were calculated by averaging all item scores within each construct. Structural equation modeling (SEM) was used to compare differences between educator and employer expectations towards individuals with and without disabilities. Roles of participants were dummy coded, and the employer group was used as the reference group. SEM was also used to compare the differences between educators’ and employers’ perspectives toward individuals with disabilities vs. their perspectives toward those without disabilities. Differences between individuals with and without disabilities were calculated for both educator and employer groups and then entered into the path model for further analysis. Mplus V.5.2 (Muthén & Muthén, 2007) was used to conduct all SEM analyses.

Table 4.1. Finalized items of the five constructs and excluded items for four groups.

Scales	Description	Means [ <i>SDs</i> ]				Reliability [ $\alpha$ ]			
		Educator		Employer		Educator		Employer	
		D	ND	D	ND	D	ND	D	ND
BS	Ability to read with understanding	2.98[.87]	3.62[.58]	3.51[.73]	3.59[.70]	.70	.70	.77	.71
	Ability to listen actively	3.32[.61]	3.67[.47]	3.48[.59]	3.58[.53]				
	Ability to speak so others can understand	3.21[.73]	3.62[.56]	3.46[.66]	3.57[.60]				
	Ability to convey ideas in writing	2.32[.92]	2.77[.92]	3.00[.83]	3.09[.82]				
HO	Ability to recognize and correct own mistakes	2.79[.80]	3.32[.63]	3.12[.69]	3.21[.66]	.90	.84	.90	.89
	Ability to use critical thinking	2.50[.85]	3.07[.81]	2.95[.78]	3.08[.73]				
	Ability to apply basic math	2.48[.86]	2.91[.86]	2.90[.84]	3.01[.84]				
	Ability to solve problems	2.58[.76]	3.16[.77]	2.89[.73]	3.00[.68]				
	Ability to negotiate and resolve conflict	2.76[.87]	3.37[.71]	2.85[.79]	2.94[.78]				
	Ability to apply basic computer/technology skills	2.38[.83]	2.85[.85]	2.83[.88]	2.92[.88]				
	Ability to make plans and work towards goals	2.53[.84]	3.06[.75]	2.80[.79]	2.90[.80]				
	Ability to use creative thinking	2.03[.93]	2.38[.97]	2.67[.79]	2.78[.79]				
BWS	Ability to be on time	3.73[.48]	3.83[.38]	3.55[.59]	3.61[.53]	.80	.86	.87	.83
	Ability to seek help when needed	3.61[.59]	3.72[.51]	3.50[.62]	3.54[.58]				
	Ability to follow schedules	3.49[.61]	3.72[.49]	3.46[.62]	3.51[.58]				
	Ability to cooperate with others and be a good team player	3.26[.71]	3.55[.58]	3.40[.66]	3.44[.63]				
	Ability to stay with a task until finished	3.33[.66]	3.68[.51]	3.37[.62]	3.43[.60]				
	Ability to work well with people from diverse backgrounds	3.37[.46]	3.56[.64]	3.32[.75]	3.37[.71]				
SS	Ability to monitor quality of work	3.02[.76]	3.54[.61]	3.20[.71]	3.29[.67]	.70	.84	.85	.83
	Ability to show respect for others	3.68[.51]	3.74[.46]	3.62[.58]	3.66[.53]				
	Ability to use socially acceptable language	3.50[.63]	3.63[.54]	3.44[.70]	3.51[.62]				
	Ability to accept authority	3.54[.64]	3.73[.50]	3.37[.74]	3.42[.71]				
	Ability to maintain appropriate personal appearance	3.58[.59]	3.69[.50]	3.25[.72]	3.32[.67]				
	Ability to accept criticism	3.32[.68]	3.62[.57]	3.13[.70]	3.20[.66]				

Table 4.1. Continued

Scales	Description	Means [ <i>SDs</i> ]				Reliability [ $\alpha$ ]			
		Educator		Employer		Educator		Employer	
		D	ND	D	ND	D	ND	D	ND
PA	Demonstrating personal integrity/honesty in work	<i>3.67</i> [.56]	<i>3.77</i> [.44]	<i>3.73</i> [.52]	<i>3.77</i> [.45]				
	Demonstrating responsibility in work	3.31 [.74]	3.58 [.51]	3.40 [.62]	3.44 [.59]	.73	.73	.85	.84
	Demonstrating ability to adapt to change	3.00 [.81]	3.43 [.64]	3.14 [.69]	3.18 [.66]				
	Demonstrating motivation towards work	2.80 [.79]	3.11 [.73]	3.07 [.65]	3.13 [.63]				
	Demonstrating personal interest in work	2.53 [.81]	2.82 [.83]	3.00 [.69]	3.05 [.68]				
Ability to follow instructions	<i>3.61</i> [.52]	<i>3.85</i> [.36]	<i>3.70</i> [.52]	<i>3.76</i> [.46]					
Excluded Items	Ability to show high regard for safety procedures	3.44 [.76]	3.79 [.45]	3.52 [.67]	3.56 [.65]				
	Ability to learn new skills	2.97 [.74]	3.42 [.68]	3.37 [.64]	3.44 [.63]				
	Demonstrating initiative in work	2.84 [.78]	3.27 [.75]	3.10 [.72]	3.17 [.68]				
	Demonstrating confidence in work	2.76 [.76]	3.15 [.72]	2.94 [.70]	2.99 [.69]				
	Ability to advocate for self	3.25 [.78]	3.38 [.67]	2.71 [.78]	2.79 [.80]				
	Ability to control self and work without direct supervision	2.88 [.79]	3.55 [.62]	3.13 [.79]	3.26 [.75]				

Note: BS = Basic Skills; BWS = Basic Work Skills; D = Disabled; HO = Higher Order Thinking Skills; ND = Nondisabled; PA = Personal Attributes; SS = Social Skills. The italicized numbers refer to the top-five rated employability skills for each group

## Results

### **Employability Skills Perceived as Important by Educators and Employers**

**Top Five Skills.** As shown in Table 4.1, based on the rank order of means, four employability skills received the highest ratings from both educators and employers for both individuals with and without disabilities; “ability to be on time,” “ability to show respect for others,” “demonstrating personal integrity/honesty in work,” and “ability to follow instructions.” However, educators and employers had different opinions about the fifth important skill. For individuals with disabilities, educators valued “ability to seek help” whereas employers valued “ability to show high regard for safety procedure.” For individuals without disabilities, educators valued “ability to show high regard for safety procedure” whereas employers valued “ability to read with understanding.”

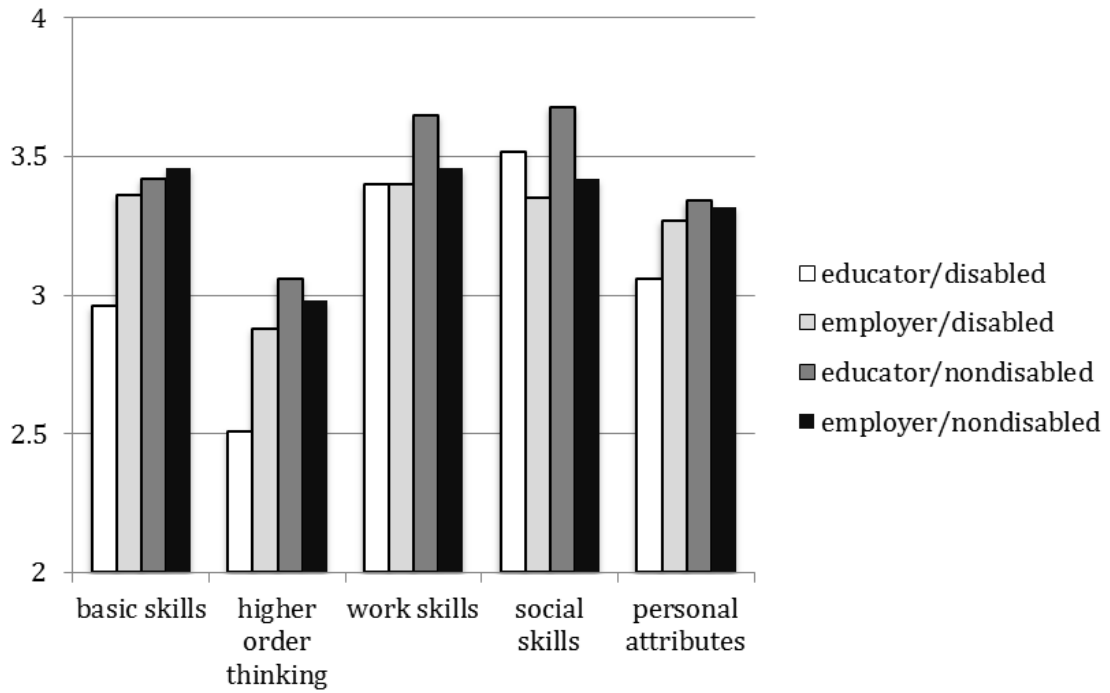
**Rankings of Employability Skill Areas.** Descriptive statistics (means and standard deviations (SD)) and the zero-order correlations for the five constructs are listed in Table 4.2. As illustrated, educators and employers ranked employability skill areas differently for both individuals with and without disabilities. Means of the five employability skill areas are graphed in Figure 4.1, which shows some noticeable trends among the four categories. First, both educators and employers ranked all skill areas higher for individuals without disabilities than for individuals with disabilities. This indicates that both groups had higher expectations for individuals without disabilities than for individuals with disabilities.

Second, differences emerged between the rankings of educators and those of employers. For individuals with disabilities, educators ranked “social skills” as most

Table 4.2. Means, standard deviations, and correlations of the five constructs.

Group	Constructs	With-Disability Group					Without-Disability Group				
		1	2	3	4	5	1	2	3	4	5
Educator	Basic Skills	–	.68*	.32*	.24*	.37*	–	.62*	.38*	.38*	.45*
	Higher-Order Thinking Skills		–	.47*	.23*	.59*		–	.49*	.38*	.60*
	Basic Work Skills			–	.69*	.59*			–	.82*	.65*
	Social Skills				–	.48*				–	.63*
	Personal Traits					–					–
	Means	2.95	2.51	3.40	3.52	3.06	3.42	3.06	3.65	3.68	3.34
	SDs	.58	.65	.44	.41	.52	.44	.51	.40	.40	.45
Employer	Basic Skills	–	.65*	.50*	.52*	.53*	–	.63*	.48*	.50*	.51*
	Higher-Order Thinking Skills		–	.63*	.56*	.65*		–	.62*	.55*	.64*
	Basic Work Skills			–	.81*	.73*			–	.78*	.68*
	Social Skills				–	.709*				–	.67*
	Personal Traits					–					–
	Means	3.36	2.88	3.40	3.35	3.27	3.46	2.98	3.46	3.42	3.32
	SDs	.55	.60	.48	.54	.51	.49	.58	.43	.50	.47

\* $p < .05$  (2-tailed).



*Figure 4.1.* Means of employability skill areas for four groups.



important, followed by “personal traits,” “basic work skills,” “basic skills,” and “higher-order thinking skills.” Employers, on the other hand, ranked “basic work skills” as most important, followed by “basic skills,” “social skills,” “personal traits,” and “higher-order thinking skills.” Moreover, when comparing the means of each construct for individuals with disabilities across educators and employers, employers ranked the following three skill areas as more important than educators did: “basic skills,” “higher-order thinking skills,” and “personal traits.” However, educators ranked “social skills” as more important than employers did. The differences may indicate that educators and employer have different expectations for individuals with disabilities. That is, employers may have higher expectations for individuals with disabilities in the areas of basic skills, higher-order thinking skills, and personal traits, while educators may have higher expectations for individuals with disabilities to possess social skills.

### **Difference Between the Perspectives of Educators and Employers**

A path analysis was conducted to examine differences between the perspectives of educators and employers regarding which employability skills were more important. The hypothesized model (see Figure 4.2) was saturated, indicating that the model fit the data perfectly. Values of coefficients for the paths were estimated for the model (Bentler, 1990).

Standardized path coefficients are presented in Figure 4.2. All the path coefficients with a solid line are statistically significant at  $p < .05$ ; path coefficients with a dashed line are not statistically significant. A significant path coefficient indicates that educators and employers differed on their rating of important employability skills. For

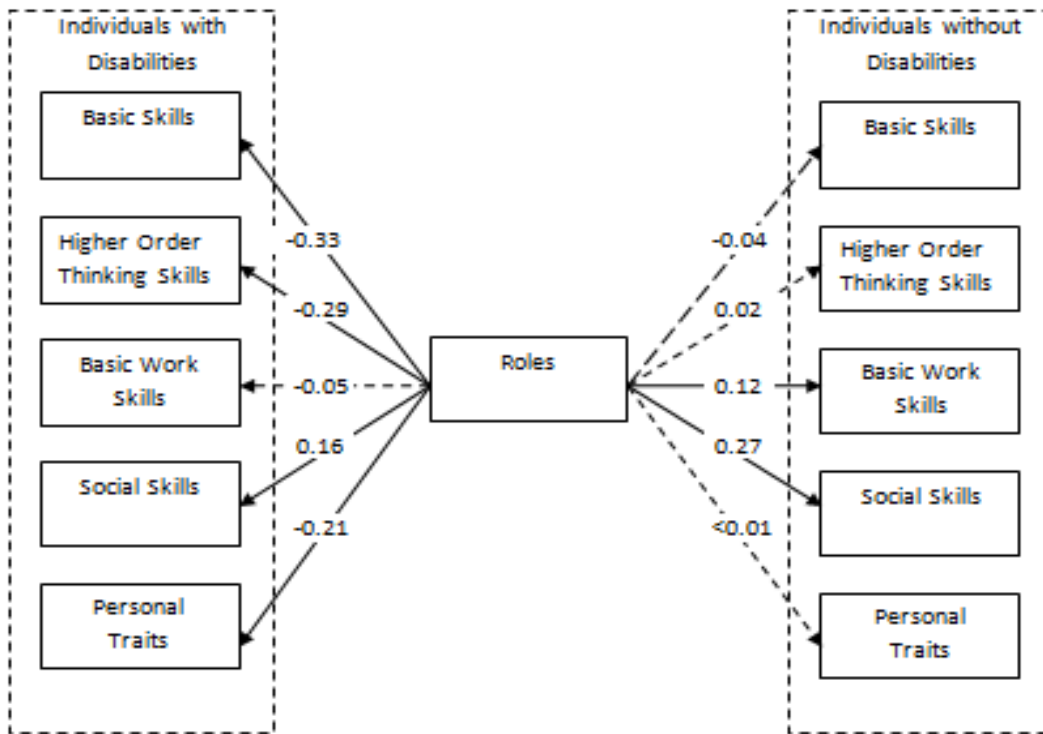


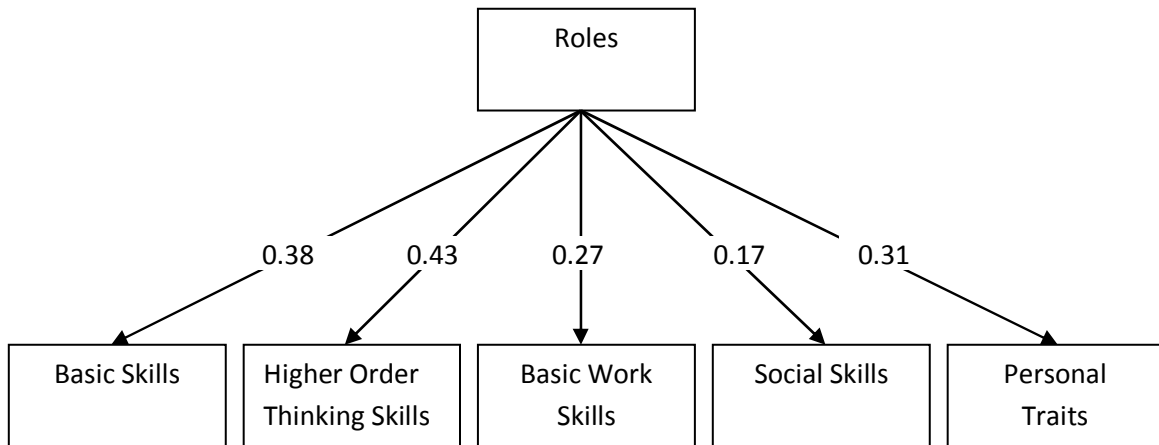
Figure 4.2. Hypothesized path model A.

Note. The employer group is coded as the reference group. All path coefficients are standardized and statistically significant at  $p < .05$ , except for the dashed paths.

individuals with disabilities, ratings were statistically significant different in four skill areas: basic skills ( $\gamma = -.33, p < .01$ ), higher-order thinking skills ( $\gamma = -.29, p < .01$ ), social skills ( $\gamma = .16, p < .01$ ), and personal traits ( $\gamma = -.21, p < .01$ ). Because the employer group was coded as the reference group, these standardized path coefficients indicate that educators' ratings were lower than employers' ratings by .33 SD for basic skills, by .29 SD for higher-order thinking skills, and by .21 SD for personal traits for individuals with disabilities, but higher than employers' ratings by .16 SD for social skills. In other words, educators tended to hold lower expectations for individuals with disabilities in the areas of basic skills, higher-order thinking skills, and personal traits while holding higher expectations in the area of social skills. For individuals without disabilities, only two areas differed significantly between educators and employers: basic work skills ( $\gamma = .12, p < .05$ ) and social skills ( $\gamma = .27, p < .01$ ), which indicates that educators had higher expectations than employers in the areas of basic work skills and social skills for individuals without disabilities.

### **Difference Between Educators and Employers Regarding How They Perceive Individuals With Disabilities Versus Those Without Disabilities**

A path analysis (see Figure 4.3) was conducted to compare the difference between educators and employers regarding their expectations for individuals with versus those without disabilities. This path model was also a just-identified model indicating a perfect fit. (All standardized path coefficients are presented in Figure 4.3.) All path coefficients were statistically significant at  $p < .05$ , indicating that educators had more differential expectations for individuals with, versus those without disabilities



*Figure 4.3.* Hypothesized path model B.

*Note.* The employer group is coded as the reference group. All path coefficients are standardized and statistically significant at  $p < .05$ .

than employers in all five skill areas: by .38 SD for basic skills, by .43 SD for higher-order thinking skills, by .27 SD for basic work skills, by .17 for social skills, and by .31 for personal traits. Thus, compared to employers, educators showed a larger discrepancy in their expectations for individuals with disabilities versus those without disabilities in all five employability skill areas.

### **Discussion**

Both employers and educators play essential roles in improving student employment outcomes. Employers make final hiring decisions while educators provide direct training to students to meet employers' demands. It is important to identify both groups' perspectives on critical employability skills. This study identified employability skills that are valued by both educators and employers for individuals with and without disabilities and examined discrepancies between the perspectives of the two groups.

Findings revealed that some employability skills are valued by both educators and employers for all entry-level employees, regardless of the type of disability. These skills include "ability to be on time," "ability to show respect for others," "demonstrating personal integrity/honesty in work," and "ability to follow instructions." This finding confirms the results of previous studies, which found that similar employability skills were generally valued by employers; for example, being on-time (e.g., Blanck, 1998; McFarlin, Song, & Soantag, 1991; Kregel & Unger, 1993), work integrity/honesty (e.g., Blanck, 1998; Casner-Lotto & Barrington, 2006; Walsh, 2010), and "ability to follow instructions" (e.g., Baxter & Young, 1982; McCrea, 1991). Nevertheless, for employees with disabilities, educators ranked "ability to seek for help" higher than most other skills

whereas employers ranked “ability to show high regard for safety procedure” as one of the top five important skills. Consistent with a number of previous studies, “safety” was one of the major concerns of the employers when hiring employees with disabilities (Blanck, 1998; Petty & Fussell, 1997). Although not warranted, this concern may potentially cause employer bias toward not hiring individuals with disabilities or even workplace discrimination.

Some noteworthy discrepancies were found between educators and employers with regard to their expectations for individuals with disabilities. First, the overall rankings of the five skill areas were different between the two groups. Specifically, educators regarded social skills as most important, followed by personal traits, basic work skills, basic skills, and higher-order thinking skills whereas employers ranked basic work skills and basic skills as the top two most important skill areas. This finding is different from the results of a previous study (McCrea, 1991), in which both educators and employers chose the work-related category as being most important for job success by individuals with disabilities. It is not clear the results from these two studies differ. We speculate that the difference may be attributed to changes in the job market in the past 20 years, during which the structure of the U.S. economy has changed significantly.

When comparing the ratings on each skill area for the educator and employer groups, educators considered social skills (e.g., showing respect for others and using socially acceptable language) more important than did employers, while employers considered basic skills, higher-order thinking skills, and personal traits more important than educators. To some extent, these findings mirror the fact that in current school

practice, training on social skills (as part of life skills or functional skills) is deemed essential in special education and is implemented across functional and academic curricula (Clark, Field, Patton, Brolin, & Sitlington, 1994). The importance of social skills is well recognized by educators, and teachers place a great deal of emphasis on teaching social skills. Unlike educators, employers emphasized skills that are more related to job performance and productivity (McCrea, 1991). Similarly, many previous studies have recommended that schools put more emphasis on teaching skills and attitudes perceived important by employers, including basic skills (e.g., reading, writing, and applying math) and personal attributes (e.g., dependability and integrity/honesty) (Casner-Lotto & Barrington, 2006, Baxter & Young, 1982).

Moreover, as identified by the second path analysis, educators and employers also differed in their perspectives on individuals with disabilities vs. those without disabilities. That is, educators tended to have higher expectations for individuals without disabilities and lower expectations for those with disabilities in all five skill areas. In other words, educators' expectations for individuals with and without disabilities are more different than those of employers. This finding suggests that educators hold lower expectations for students with disabilities in skill development (Harvey, Cotton, & Koch, 2005). Harvey, Cotton, and Koch (2005) surveyed 149 Career and Technology Education (CTE) educators and found their ratings of program expectations for students with disabilities were lower than for students without disabilities in social integration, academic and occupational skill attainment, and postsecondary occupational employability. Cook (2001) also found that teachers tend to have different attitudes and

expectations for students depending on severity or obviousness of disabilities. These differential expectations could affect student educational experience and outcomes because teachers may lower standards or put less effort into teaching students with disabilities.

### **Limitations of the Study**

There are several limitations in this study. First, we used a convenience sample from one region of the United States that may not represent the demographic characteristics of the nation. Further, the data were collected from voluntary participants in a manner of self-report, which may contain potential biases. Therefore, caution is warranted when attempting to generalize the results of this study.

Second, as an inherent weakness of survey studies, the findings of this study provide limited information on educator and employer perspectives. Due to the nature of the study, no detailed narrative descriptions of participant perspectives are available to explain why participants responded in certain ways and how they felt when answering the survey questions. Future studies with in-depth interviews are needed in order to collect rich data about why educator and employers value certain employability skills.

Third, the educator group in this study consisted of special and general educators, who might have different perceptions on critical employability skills for students with and without disabilities because they assume different responsibilities and teach different curricula in schools. It is recommended that future research attempt to determine whether these two groups have different perspectives. Furthermore, future research is needed to investigate the perspectives of other parties who play a role in the transition to



employment process (e.g., parents, vocational rehabilitation counselors). Their perspectives may help identify and teach essential employability skills to students with disabilities.

### **Implications for Practice**

Educators and employers agree on certain critical employability skills and personal qualities (e.g., being on time, following instructions, and integrity/honesty). Being aware of the shared perspective on these skills and qualities, educators will have more confidence in teaching these skills to their students, who can also be better prepared to demonstrate desired personal qualities to employers during job interviews or in the workplace. For other employability skills (e.g., showing high regard for safety procedures) that educators did not value as much as employers, it is important that teachers incorporate them into skill trainings or allocate more time to teaching them (McCrea, 1991).

With the awareness that employers demand employees to possess adequate basic skills (e.g., reading, writing and communication), schools should emphasize teaching basic academic skills to students with disabilities. Typically, students in special education spend more time on learning functional and daily living skills than learning academic skills; however, these students generally need more instruction in reading, writing, and communication skills. In order to meet employers' expectations, teachers should place a higher priority in teaching basic academic skills to students with disabilities. Creative instructional strategies are needed to combine academic and functional skills instruction for students with moderate or severe disabilities.

An interesting finding of this study was that educators viewed individuals with disabilities more differently from their nondisabled peers than employers did. This may imply that educators considered individuals with disabilities as less capable than those without disabilities and, therefore, have lower expectations for them. Historically, students in special education were not held accountable or held accountable to lower standards, and, therefore, have acquired poor educational experience and outcomes. Although the mandates of IDEA (IDEA, 1990) and the No Child Left Behind Act (NCLB) (2001) aimed at ensuring equal educational opportunities for students with disabilities by pushing schools to involve them in the general curriculum, some educators have expressed doubt about whether students with disabilities should be taught and held accountable to the same standards as their nondisabled peers (Agran, Alper, & Wehmeyer, 2002). Teacher biases with regard to the capability of students in special education may result in lower teaching standards and expectations. However, it makes sense for employers to hold similar expectations for job candidates regardless of disability conditions. The findings of this study serve as an alert to educators that they should hold high expectations for all students and put more efforts into preparing students with disabilities to meet employers' demands.

## CHAPTER V

### CONCLUSIONS

The overall purpose of this dissertation was to provide insight into employers' attitudes toward workers with disabilities as well as educators' and employers' expectations for entry-level employees with disabilities. Three separate studies were conducted to explore the answers to following questions that have not been addressed by the existing literature: (a) what are general employer attitudes toward hiring workers with disabilities, including perspectives about their employability and job skills, satisfaction on work performance, perceived concerns and benefits in the recent decade? (b) What are critical employability skills expected by employers for entry-level employees with disabilities? (c) What are educators' perspectives on important employability skills, and are they similar to employers' perspectives? Several findings of this line of research can be informative for future practice.

First, the literature review (Chapter II) updated trends in employer attitudes. On a positive note, an increasing number of employers expressed favorable attitudes toward workers with disabilities and noted that they would like to hire qualified workers with disabilities. Further, the majority of employers who had hired or worked with employees with disabilities showed positive attitudes toward individuals with disabilities. Myths related to the costs of hiring employees with disabilities were clarified. This finding should be very encouraging for individuals with disabilities as well as field practitioners who support employment for individuals with disabilities. Results also indicated that there was a greater chance for IWDs to obtain jobs from businesses that had experience

with workers with disabilities. Those businesses should be on the top list for job seekers with disabilities.

Second, despite those promising findings, employers also showed some concerns (e.g., safety, and employability skills) toward workers with disabilities and need to be addressed by individuals with disabilities. Particularly, many concerns were associated with stereotypes and misconceptions with certain types of disabilities (e.g., psychiatric disabilities). Employers with no experience in hiring or no previous contact with IWDs are more likely to express concerns. This leads to the assumption that if employers have more knowledge about specific disabilities or have some interactions with individuals with disabilities, their misconceptions or stereotype might be reduced or eliminated. Future research need to investigate how fear or lack of knowledge about specific disabilities affect employers' hiring or retention decisions, and what intervention(s) can be implemented to change negative employer attitudes.

Furthermore, as indicated in two survey studies on valued employability skills by employers and educators (Chapter III and IV), four employability skills are considered most important for entry-level workers regardless of disability conditions: punctuality, being respectful, integrity/honesty, and being able to follow instructions. These skills are mostly basic personal qualities rather than higher-order thinking skills or specific work skills. Truly, in the 21<sup>st</sup> century work places and skills requirements are undergoing major change; thus, employers want more and more trainable workers. Apparently, those basic qualities that make a person a potentially good employee are now more important to employers. Individuals with disabilities should be aware of these desirable qualities

and demonstrate them to employers during the job interview and recruitment process. Schools should also place a higher emphasis on relevant training in and requirement of these skills for students.

In addition, findings related to discrepancies between employers' and educators' expectations on important employability skill areas filled a gap in the current literature. Apparently, educators considered social skills to be particularly important for individuals with disabilities. However, employers considered skill areas (e.g., basic skills and higher order thinking skills) related to job performance and productivity to be more important. Expectations for those skills are often attenuated for students with disabilities, a fact that needs to be corrected. This finding sends a warning message to current school practice that schools need to put more effort into teaching basic skills such as reading, writing and math skills.

The studies conducted as part of this dissertation are subject to a number of limitations. First, the literature review failed to scientifically measure the qualities of the studies examined due to variations in their study designs and methods. Neither did it account for or weigh those study limitations when generalizing research findings. Second, survey studies for this dissertation were limited in many aspects, including representativeness of the sample, potential self-report bias, and simplicity in nature. Detailed description of limitations may be found in Chapters III and IV.

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