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INVESTIGATING EMPLOYABILITY: TESTING THE RAW FRAMEWORK

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Psychology:
Industrial/Organizational

by
Daniell Jean Study
December 2018

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Approved by:

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ABSTRACT

In a recent model of employability, Hogan, Chamorro-Premuzic, and Kaiser (2013) defined employability as the ability to gain and maintain employment and find new employment when necessary. The authors presented employability as a formative construct containing an ability dimension (the ability to do the job), a social skills dimension (being rewarding to work with), and a motivational dimension (being willing to work hard). There is no question as to whether these three dimensions affect one's level of employability; research is abundant on the positive relationships between intelligence, social and emotional skills, motivation and career success. However, little research has been conducted to empirically test employability models in their entirety. Thus, the purpose of this research was to test the RAW model of employability, using various indicators of the three RAW dimensions of employability using structural equation modelling. Surveys were administered electronically eliciting both a student and community sample. Marginal support was found for the hypothesized model with post hoc modifications producing an acceptable fitting model. Findings suggest that having the ability and motivation to do the job are related to being employable. However, being rewarding to work may not impact levels of employability, suggesting that employers may be asking for one thing while rewarding another.

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CHAPTER ONE

INTRODUCTION

To remain employed during economic downturns and to find new employment if necessary, it is important for individuals to know what employers want in new hires and what employers expect from current job incumbents. Over the years, the basic knowledge, skills, abilities, and other characteristics (KSAOs) necessary for employability have changed as America has moved from an industrial to a service and information-based society (Robles, 2012). These changes have led to a skills gap and concerns the differences between the KSAOs employers seek and the KSAOs job candidates and employees possess. For organizations to select individuals for 21st century jobs, employers must be able to identify the basic KSAOs needed to maintain a competitive advantage in a global market. Although decades of research has identified general mental ability as the single best predictor of career success outcomes (Schmidt & Hunter, 2004), many jobs today require additional KSAOs, including intrinsic motivation and superior social skills (Hogan, Chamorro-Premuzic, & Kaiser, 2013).

Recently, soft skills such as communication and interpersonal skills have become recognized as being just as important, if not more important, than the “hard” technical skills needed for success on the job (Cobo, 2013). These soft skills have been identified as necessary skills for a variety of jobs, including jobs

that in the past have only emphasized the necessity of technical skills (Bancino & Zevalkink, 2007). However, with the fast pace of technological change, the technical skills of today may not necessarily be the skills employers need tomorrow. This means that soft skills may be more important than the technical skills required for the job. To date, little research has tested, in their entirety, the various employability models found in the literature.

Employability has been studied from three perspectives. One line of research looks at the skills that individuals need to become competitive in a global economy (Hogan et al., 2013); another line examines the skills that are the focus of educational institutions (Jackson, 2012); and yet another examines what employers say they want in their employees and the skills that new employees possess (Cobo, 2013). The following is a review of three models of employability that focus on individual differences, rather than models that include situational factors (e.g., labor market, job resources), and are predominant in the research literature on career success.

Employability

During the last decade of the 20th century, the U.S. Department of Labor realized that for organizations to have a competitive advantage in a global economy, it was necessary to examine what employers are expecting of the next generation of high school students preparing to enter the workforce, an apprenticeship, or college. In 1991, the Secretary's Commission on Achieving Necessary Skills (SCANS) report was released (SCANS Commission, 1991).

The authors of this report recommended steps to be taken by educational institutions and parents to ensure that high school students are indeed ready and have the knowledge, skills, and abilities (KSAs) that employers want moving into the 21st century. Additionally, putting the responsibility on the parents, educational system, and organizations, this lengthy report outlined the skills needed for organizations to have a competitive advantage and for individuals to become highly employable in the 21st century.

The SCANS report outlined three basic foundations, and five competencies needed to ensure the quality of the American workforce (SCANS Commission, 1991). The five competencies were: resources (e.g., allocating time and money), interpersonal skills (e.g., working on teams, working well with others), information (e.g., data management), systems (e.g., understanding the various systems within an organization), and technology (e.g., selection and use of equipment and tools). The three foundational skills were: basic skills (e.g., reading, writing, mathematics), thinking skills (e.g., decision making), and personal qualities (e.g., self-esteem, sociability).

Following the SCANS report, the Skills Gap Report (National Association of Manufacturers, 2005) found that 50% of employees had inadequate basic employability skills with a major deficit in communication skills. These findings were confirmed with the Job Outlook report where the authors suggested communication skills are most important, yet most lacking in new hires (National Association of Colleges and Employers, 2009). Additionally, authors of a report

from the National Center on Education and the Economy, titled *Tough Choices or Tough Times* (Tucker, 2007), claim America's primary and secondary education systems are sorely outdated and that the focus should be on updating the curriculum, standards, and assessments that reflect the current needs and future needs of employers. Specifically, this report suggests that for America to stay competitive in a global economy, it must start by revamping the educational system, stating "the core problem is that our education and training systems were built for another era," suggesting that in the 21st century, there would be fewer jobs that required only a basic high school education. This report was a precursor to a common theme of today which suggests that a skills gap exists between what employers want and what employers are finding in recent high school and college graduates (Hogan et al., 2013; Rosenberg, Heimler, & Morote, 2012).

Additionally, in a recent study concerned with the skills gap, researchers triangulated information on eight employability dimensions (basic literacy and numeracy skills, critical thinking skills, leadership skills, management skills, interpersonal skills, information technology skills, systems thinking skills, and work ethic) with ratings from recent graduates, faculty who taught these graduates, and human resource (HR) managers and recruiters (Rosenberg et al., 2012). These groups were asked which skills they felt were most needed for job performance, which skills they felt were received in college, and which skills require additional training after college. Since the purpose of this paper was to

identify what basic employability skills are desired by organizations, I am most concerned with the ratings of those who do the hiring; the HR managers. In this study, HR managers rated interpersonal skills as more important for job performance than critical thinking skills and information technology skills. Additionally, HR managers' responses indicated that recent college graduates needed additional training in interpersonal skills more than they needed additional training in critical thinking skills, information technology skills, leadership skills, or systems thinking skills. However, it must be noted that HR managers rated literacy-numeracy skills as most needed for the job (M = 4.55), followed by leadership skills (M = 4.53), work ethic (M = 4.53), and interpersonal skills (M = 4.24), on a five-point scale. These findings suggest that major deficits lie in what have been labeled as soft skills rather than the technical skills required for the job. However, having the ability and willingness to do the job are not precluded from the necessary skill-sets required today. These reports composed warnings from researchers of the impending skills gap that currently exists.

Models of Employability – Theory

Several theoretical models of employability have been proposed by researchers, some more complex than others. Most researchers agree that some level of ability is necessary to complete the tasks associated with the job, along with some form of social or team work dimension, which entails being able to work well with others to meet organizational goals (Hogan, et al. 2013; Van der Heijde & Van der Heijden, 2006).

One model which has been empirically tested addresses employability from a competency-based approach and defined employability as “the continuous fulfilling, acquiring or creating of work through the optimal use of competencies” (Van der Heijde & Van der Heijden, 2006, p. 453). This competency-based approach contains five dimensions: occupational expertise, anticipation and optimization, personal flexibility, corporate sense, and balance. Occupational expertise, which can be enhanced by the other four dimensions, is the job-related knowledge and skills associated with knowing how to perform the job-related tasks. The authors argue that this dimension is essential, and that to remain employable during economic downturns one must possess the job-related knowledge or “hard” skills of the job. However, these job specific skills can be enhanced by four other dimensions (anticipation and optimization, personal flexibility, balance, and corporate sense).

Anticipation and optimization refer to the ability to prepare for future changes in the workplace in a “personal and creative manner” for optimal job and career outcomes (p. 545). Personal flexibility requires adapting to current environmental changes that are beyond the employee’s control. Balance entails balancing the employer’s interests with opposing employee career and private interests. Finally, corporate sense pertains to the ability to work well with others, “sharing responsibilities, knowledge, experiences, feelings, credits, failures, [and] goals...” and “builds on social capital (networks)...social skills, and emotional intelligence” (p. 455).

To evaluate their model, Van der Heijde and Van der Heijden conducted a hierarchical regression analysis to determine the predictive validity of the employability dimensions on measures of objective career success (promotions within organization, promotions over the entire career, gross income per month, and periods of unemployment) and subjective career success (job satisfaction, interpersonal success, financial success, hierarchical success, and life satisfaction). The sample consisted of employees from a variety of jobs at middle and above educational levels (e.g., high school education, basic vocational education, college education). Occupational expertise was a significant negative predictor of the number of promotions over the entire career; the higher the occupational expertise, the fewer the promotions across one's career. This makes sense, in that expertise in only one area may constrain a person from organizational advancement or movement. However, occupational expertise showed a significant and positive relationship with interpersonal success. Occupational expertise did not significantly predict any of the other outcome criteria. Anticipation and optimization negatively predicted periods of unemployment and financial success. Personal flexibility was found to be negatively related to periods of unemployment. Balance was related to job and life satisfaction. Corporate sense was a significant predictor of promotions over the entire career, gross income per month, and hierarchical success, explaining 29%, 20%, and 35% of the variance, respectively, in a model that included individual factors (e.g., age, gender), supervisor factors (e.g., age, gender, years

of supervision), and the other four employability dimensions. Additionally, corporate sense was significantly correlated ($r = -.15$) with periods of unemployment greater than one month. However, this study did not delineate voluntary unemployment (not seeking employment) from involuntary unemployment (seeking employment) which may be the cause of the small correlation. This is important as highly employable individuals may have long periods of unemployment because they choose to take a break from work (e.g., school, family matters). Thus, Van der Heijde and Van der Heijden's study offers evidence that one can enhance his or her employability and career success by having some occupational expertise which can be enhanced by having higher levels of the four additional competencies reviewed above.

Taking a psycho-social approach and defining employability as “a multidimensional aggregate of career identity, personal adaptability, and social and human capital” researchers present a unique model outlining the importance of proactivity, including being socially proactive to expand one's resource base. (Fugate, Kinicki, & Ashforth, 2004, p.32). Like Van der Heijde and Van der Heijden, the authors also suggested that having the ability to do the job is essential to being employable. However, they also argue that each dimension has value and that these dimensions in combination have reciprocal relationships and together can increase levels of employability. Career identity refers to the assimilation of past and current experiences into meaningful structures to help identify and realize current and future opportunities. Personal adaptability refers

to one's willingness to change to meet situational demands (e.g., optimism, proactivity, openness, locus of control, and generalized self-efficacy). This model takes a different approach on the social component than the other models presented here. Rather than focusing on workers' ability to get along with others, Fugate et al.'s model emphasizes the strength of an individuals' social network as resources. Social capital refers to the inherent benefits of social networks with size and strength of one's network important in determining the potential usefulness of one's social network. Human capital encompasses a host of variables including experience, emotional intelligence, and job specific knowledge, skills, and abilities (KSAs).

Hogan et al.'s (2013) RAW model of employability takes a broader view of what it means to be employable in the 21st century. This model asserts that humans have two main motivations in life; the desire to "get ahead" and "get along." The RAW model of employability consists of (a) being rewarding to work with, (b) having the ability to do the job, and (c) being willing to work hard (see Figure 1).



Figure 1. RAW Model of Employability.

Hogan, R., Chamorro-Premuzic, T., & Kaiser, R. B. (2013). Employability and career success: Bridging the gap between theory and reality. *Industrial and Organizational Psychology*, 6(1), 3-16.

This model is compensatory with the idea that the more of each dimension, the greater the individual employability, and being low in one dimension can be compensated for with higher levels of the other dimensions. Thus, if someone is low on one dimension, it can be compensated for by being high on other dimensions. Rarely do organizations hire individuals who do not have the minimum ability, expertise, and/or know-how to do the job. However, when an employee is at lower levels, of a given dimension, it can be compensated for with higher levels of motivation (willingness to work hard) and/or higher levels of social or interpersonal compatibilities (being rewarding to work with). For example, an employee with lower ability may have good social support within the work environment and acquire the necessary assistance from others to

successfully complete a task. In support of this example, in a study on helping behaviors, employees tended to offer more assistance to other employees only if the need for help was due to ability rather than effort (Porter, Hollenbeck, Ilgen, Ellis, West, & Moon, 2003). Results from Porter et al.'s study indicates that even at lower levels of ability, as long as effort is displayed (willingness to work hard), a less able employee may find the help needed to succeed.

Ability to Do the Job

General Mental Ability

The concept of general mental ability or general intelligence has been around for more than a century and has been widely accepted among researchers and employers as an indicator of employability (Cobo, 2013). More than 100 years ago, Charles Spearman (1904) argued that cognitive ability can be organized hierarchically and conceived of the highest order of intelligence as general intelligence or the 'g' factor. Spearman proposed a two-factor theory of intelligence, consisting of general intelligence (g) and test specific uniqueness (s), and that every mental ability test consists of these two factors. Spearman argued that every mental ability test taps into some portion of g. Not long after Spearman's assertions, the military grasped the importance of evaluating intelligence for selection and placement purposes.

During the First World War, the U.S. Army began utilizing these types of tests to determine the ability, and therefore placements of recruits (Boake, 2002). With the Army's practice of using ability testing in recruit placement, many

researchers began to look at the effects of intelligence on job related outcomes. The authors of the well-known Terman Life Cycle Studies examined outcomes of intelligence, or giftedness, of participants over their lifetime. Thus, the first longitudinal study on highly intelligent individuals was conducted. Results from this study have demonstrated that high intelligence or cognitive ability predicts several positive outcomes over the lifetime, including salary and occupational prestige (Judge, Illes, & Dimotakis, 2010; Judge, Klinger, & Simon, 2010; Terman, 1954).

In the latter part of the 20th century, researchers began investigating relationships between general mental ability and work outcomes on a meta-analytic scale. Findings suggested that when GMA was combined with a structured interview, which can assess one's motivation intentions and social skills, both measures combined contributed to 51% of the variability in performance scores across a variety of jobs (Schmidt & Hunter, 1998). Although structured interviews are far superior compared to unstructured interviews, they can still bring a considerable amount of bias to the hiring/placement process. I will return to these dimensions in greater detail shortly.

Additional research has examined GMA longitudinally. Results suggest that GMA is stable over the lifetime (Deary, Whalley, Lemmon, Crawford, & Starr, 2000) and predicts both current performance and performance at later occupational levels (Schmitt & Hunter, 2004). More recently, one researcher has suggested that g can be found in all problem-solving tasks (Lubinski, 2004), of

which many exist. This general factor can be measured in a variety of ways. For example, the Wechsler Adult Intelligence Scale (WAIS) (2014) assesses two dimensions of intelligence (IQ), verbal IQ and performance IQ. According to Spearman (1904), each of these subtests of the WAIS would tap into some portion of *g*. However, with fear of legal ramification due to ethnicity biases in cognitive ability testing, employers tend to seek alternative avenues to identify one's level of ability which is reflective in the collection of biodata information (e.g., years of experience).

Experience

Employers are interested in the amount of work experience one has demonstrated as it is consistently information that is asked for on job applications. With 54% of the variability in performance scores explained when years of experience was included with tests of GMA (Schmidt & Hunter, 1998), one's ability to do the job should also be reflected in how much experience one has. With the increased use in meta-analytic investigations, the relationships among various measures of ability and performance have become clearer, with experience being a popular variable of interest enabling researchers to meta-analyze this constructs' relationship with performance. In a sample consisting of more than twenty-five thousand participants, over 44 studies, researchers revealed a significant positive correlation between amount of work experience and job performance, $\rho = .43$ (Quinones, Ford, & Teachout, 1995). Additionally, researchers conducting a meta-analytic study looking at experience and job

performance, utilizing a total sample of 16,058 participants, found small to moderate correlations depending on level of job complexity, between number of years on the job and job performance, $\rho = .39$ and $.32$, respectively (McDaniel, Schmidt, & Hunter, 1988). There is an abundance of evidence in the literature to suggest that as job experience increases, so does performance.

Therefore, the following hypotheses are examined:

H1: One's ability to do the job will be positively related to (a) general mental ability and (b) experience.

H2: One's ability to do the job will be positively related to employability.

Although general mental ability has been shown to be the most important predictor of job performance, considerable variability in job performance remains unexplained, which is key to the RAW and other employability models. Variables such as interpersonal and social skills along with other dispositions have been shown to add to the predictability of these criteria (O'Boyle, Humphrey, Pollack, Hawver, & Story, 2011). These other characteristics include variables that are reflective of being rewarding to work with.

Rewarding to Work With

Research in the early part of the 20th century attempted to delineate different kinds of intelligence and suggested that social intelligence is a separate and distinct construct from general intelligence (Thorndike, 1920). However, with the boom of research on general intelligence, and the resulting strong relationships with career success, this social component of intelligence was

largely ignored. Researchers interested in social intelligence failed to distinguish the construct from general intelligence until the early 1980s, when Ford and Tisak (1983) were able to show that social effectiveness (self, peer, and teacher ratings of social competence, empathy, and social goal attainment) loaded onto a separate factor than general intelligence (three different aptitude tests and grade point average). These researchers also found that social intelligence was able to predict social effectiveness better than cognitive ability. These findings were able to help aid in research on the antecedents and outcomes of social intelligence. Concern for general mental ability may be necessary for an economy with a focus on technical ability but may not be sufficient in the current knowledge and service-based economy which requires solid relationship or social skills (Robles, 2012). Thus, the importance of studying the role of social intelligence in the workplace is of utmost importance.

Although the definitions of employability differ, the idea that employability is multidimensional and includes some form of social know-how is not theoretically unique to the RAW model. Researchers have examined this phenomenon using a variety of approaches including examining interpersonal skills, people skills, social intelligence, and emotional intelligence. Using Hogan et al.'s (2013) RAW model of employability as the basis for this research, I contend that being rewarding to work with involves both verbal and non-verbal communication dimensions. Thus, the R in this model involves being socially perceptive or having a sensitivity to others which enables an individual to read

environmental cues (e.g., social norms), including cues from individuals and groups (e.g., emotions), and change behavior as the situation demands.

Additionally, someone who is rewarding to work with can control his/her emotions and is also sensitive in his/her verbal communication with others in the workplace.

Social Perceptiveness, Emotional Intelligence, and Emotional Control

With Goleman's publication of *Working with Emotional Intelligence* in 1998, emotional intelligence (EI) became a topic of interest among researchers interested in career success. There are several overlapping definitions of emotional intelligence. In its broadest conceptualization, EI has been defined as "the set of abilities (verbal and nonverbal) that enable a person to generate, recognize, express, understand, and evaluate their own, and others, emotions to guide thinking and action that successfully cope with environmental demands and pressures" (Van Rooy & Viswesvaran, 2004, p. 72). Although researchers have argued over whether EI is an ability or a disposition, this argument is a matter of how the construct is measured rather than a theoretical argument, in that the dispositional construct may be tapped into with self-report measures while EI as an ability is accessed with performance type measures (Petrides & Furnham, 2001). For the purposes of this research, the dispositional approach to EI is examined.

Relationships have been found between EI and several work-related outcomes in various contexts. For example, researchers have found positive

relationships between EI and job performance across a variety of jobs (e.g., retail sales, university employees, executives, analyst, and clerical) (Cote, & Miners, 2006; Moon & Hur, 2011; Lopes, Grewal, Kadis, Gall, & Salovey, 2006; O'Boyle, Humphrey, Pollack, Hawver & Story, 2011; Rosete & Ciarrochi, 2005). EI has been positively related to academic performance (Mestre, Guil, Lopes, Salovey, & Gil-Olarte, 2006), job satisfaction (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010), work-life balance (Kumarasamy, Pangil, & Mohd Isa, 2016), organizational citizenship behaviors (Carmeli & Josman, 2006), and negatively related to job burnout (Lee & Ok, 2012; Weng, Hung, Cheng, Chang, Huang, 2011). EI has been found to be related not only to the size of an individual's social network, but also to the quality of the social network (Austin, Saklofske, Egan, 2005). Furthermore, researchers have delineated EI from general mental ability (GMA); researchers have found no relationship between the two variables (Petrides & Furnham, 2001; Van Rooy & Viswesvaran, 2004). Additionally, researchers have indicated that EI is essential to personal and professional success (Freedman, Ghini, Fiedeldej-Van Dijk, 2005). The accumulation of research on EI has enabled researchers to investigate EI on a meta-analytic scale.

In a recent meta-analysis, researchers investigated three different methodologies used in measuring emotional intelligence (O'Boyle et al, 2011). Results from O'Boyle et al.'s meta-analysis revealed moderate relationships between emotional intelligence and job performance ranging from .24 to .30,

depending on the research operationalization. The operationalization which involved measures of both verbal (social skill) and non-verbal (emotional intelligence) components was able to explain more variance than the other two conceptualizations which lacked a verbal component. This relationship was significant over and above measures of cognitive ability and the Five Factor Model of personality. These findings indicate that job performance is better predicted when including a verbal communication dimension.

Verbal Communication

Although many jobs require the ability to communicate with others (e.g., coworkers, clients, supervisors), communication in the workplace remains largely unexplored by researchers (DeKay, 2012). It may seem intuitive, but research on verbal aggression can give insight into how interpersonal communication affects relationships and perceptions of coworkers, as it is argued that verbal attacks on other persons or ideas might alienate co-workers, thereby reducing one's social capital. For example, in one study, researchers sought to identify outcomes of verbal aggression and found a negative correlation between verbal aggression and trust (Marrs, 2000), as verbal aggression increased, trust decreased. As lack of trust on behalf of coworkers may reduce one's social capital (Smith, 2003) and thereby reduce the number of people one can rely on for job referrals.

Additionally, increased levels of interpersonal trust have been shown to be positively related to higher levels of team performance (Nirwan, 2014). Verbal aggression has also been shown to have a negative relationship with

agreeableness (Vanbrabant, Kuppens, Braeken, Demaerschalk, Boeren & Tuerlinckx, 2012), and mean team agreeableness has been shown to predict team performance in field studies (Bell, 2007). Marrs (2000) also found a negative relationship between verbal aggression and organizational citizenship behavior; as verbal aggression decreased, OCBs increased. Similarly, in research that examined motivation and affect of college athletes, researchers found that when the coach used verbal aggression in communicating with athletes, motivation and affect decreased (Martin, Rocca, Cayanus, & Weber, 2009).

It is expected that those with higher levels of social perceptiveness and emotional control, and less verbal aggression, will be more rewarding to work with and affect one's level of employability.

Therefore, the following hypotheses were examined:

H3: Being rewarding to work with will be positively related to (a) social perceptiveness and (b) managing one's own emotions, and negatively related to (c) verbal aggression.

H4: There will be a positive relationship between being rewarding to work with and employability.

Although recent research has focused on career success outcomes associated with GMA and interpersonal skills, few would argue against the importance of motivation to enjoying career success. Therefore, the final

dimension of Hogan et al.'s (2013) RAW employability framework, willingness to work hard is examined.

Willingness to Work Hard

The final dimension explored in Hogan et al.'s (2013) RAW model of employability is the motivational dimension; willingness to work hard. In line with Hogan et al.'s definition of this motivational dimension, willingness to work hard is defined as one who possesses a strong work ethic, perseveres in the face of challenges, and proactive towards his/her career goals.

Work Ethic

One stable disposition in line with this author's definition of willingness to work hard is work ethic. Work ethic has been defined as an intrinsic motivator; a set of values that include "an overall valuing of work as the most worthwhile way to spend one's time" (Tang, 1989), and is reflected in one's behavior (Miller, Woehr, & Hudspeth, 2002). Researchers have found that employees with a low work ethic quit their job at a significantly higher rate than those with a high work ethic, and those with a higher work ethic experience higher levels of job satisfaction and employee commitment (Saks, Mudrack, & Ashforth, 1996). Participants with a high work ethic spent more time on a task (task intensity) and had a higher rate of output (productivity) compared to those with a low work ethic (Meriac, Thomas, & Milunski, 2015; Merrens & Garrett, 1975). Researchers have also found significant relationships between work ethic and job involvement, job satisfaction, and organizational commitment (Meriac, Woehr, Gorman, &

Thomas, 2013). Thus, individuals with a strong work ethic tend to remain on the job longer, feel an obligation to the company, are happier on the job, spend more time on tasks, and outperform those with a weaker work ethic. However, work ethic is not the only indicator of being willing to work hard, as one must be able to endure through work related challenges.

Perseverance

Another disposition explored as a motivational factor of willingness to work hard is perseverance. Perseverance is defined as persisting in effort towards one's goals in the face of challenges (Duckworth & Quinn, 2009) and has been studied in a variety of contexts. Similar constructs include resilience, grit, and hardiness. To examine how psychological capital (resilience, hope, optimism, and self-efficacy) affects displaced workers, Chen & Lim (2012) examined relationships between resilience and a variety of career success variables, including employability and various job search behaviors. These researchers define their resilience dimension as:

The psychological strength of individuals to persist despite career setbacks and bounce back to where they initially were before job loss occurs. Displaced employees who are resilient possess mental strength to "stick-it-in" and exercise perseverance in reemployment. Despite career setbacks, resilient employees continue to believe that they are employable and persist in their efforts to secure a job. (Chen & Lim, 2012, p. 814)

These researchers found that psychological capital was related to perceived employability, seeking employment assistance, preparatory job search, and active job search, even after controlling for general affectivity. Similar constructs have also been related to career success.

Researchers studying grit, defined as the “perseverance and passion for long-term goals” found those with higher levels of grit experienced greater levels of success (attainment of higher levels of education, higher GPA, West Point cadet retention, and ranking in a National Spelling Bee) (Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087). In a meta-analytic study of grit, researchers found grit to be moderately related to performance and strongly related to conscientiousness, specifically the persevering dimension, and assert that the perseverance facet of grit may be where the primary utility of the grit construct lies (Credé, Tynan, & Harms, 2017). Thus, several researchers have examined this motivational component of being willing to work hard to obtain career success and have shown that perseverance is an important component in reaching one’s career goals.

Work and Career Proactivity

Finally, work and career proactivity refer to individuals who proactively seek out information from the environment that pertains to their jobs or careers (Fugate & Kinicki, 2008), and is the final indicator of being willing to work hard included in this study. These researchers found this dimension of their

employability model to be highly correlated with another dimension in their model, career motivation ($r = .57$).

Proactivity has been found to be related to a host of career outcomes. Proactive individuals “seek information of varying specificity that is relevant to their personal job and career interests” which “facilitates identification and realization of occupational opportunities” (Fugate & Kinicki, 2008, p. 508). For example, proactivity has been related to higher levels of career initiative, which in turn was related to salary increases, number of promotions over the past two years, career satisfaction, network building, and performance (Pitt, Ewing, & Berthon, 2002; Thompson, 2005; Seibert, Kraimer, & Crant, 2001). In a recent meta-analysis where researchers examined relationships between proactive personality and career outcomes and found that proactive personality predicted overall performance (objective and subjective combined) ($\rho = .26$), subjective performance (e.g., supervisor ratings) ($\rho = .38$), and objective performance (e.g., financial data) ($\rho = .16$), satisfaction ($\rho = .25$), affective organizational commitment ($\rho = .25$), and social networking ($\rho = .27$). In the same meta-analysis, proactive personality was not significantly related to work experience ($\rho = .05$) or general mental ability ($\rho = .03$) (Thomas, Whitman, & Viswesvaran, 2010). Thus, being willing to work hard is also reflective in one’s propensity to be proactive in his/her work and career and seek out opportunities to advance in these domains.

It is expected that those with higher levels of work ethic, perseverance, and work and career proactivity, will be more motivated to succeed in his/her career, which will affect one's level of employability.

Therefore, the following hypotheses are examined:

H5: Willingness to work hard will be positively related to (a) work ethic, (b) perseverance (c) work and career proactivity.

H6: There will be a positive relationship between willingness to work hard and employability.

Employability is a latent construct which can be reflected in many career success variables. As stated previously, the career success indicators of interest to this researcher include performance, breadth of professional network, and unemployment. Therefore, the following hypothesis is examined.

H7: Employability will be positively related to (a) performance, and (b) breadth of professional network, and negatively related to (c) length of involuntary unemployment.

The hypothesized model is in Figure 2.

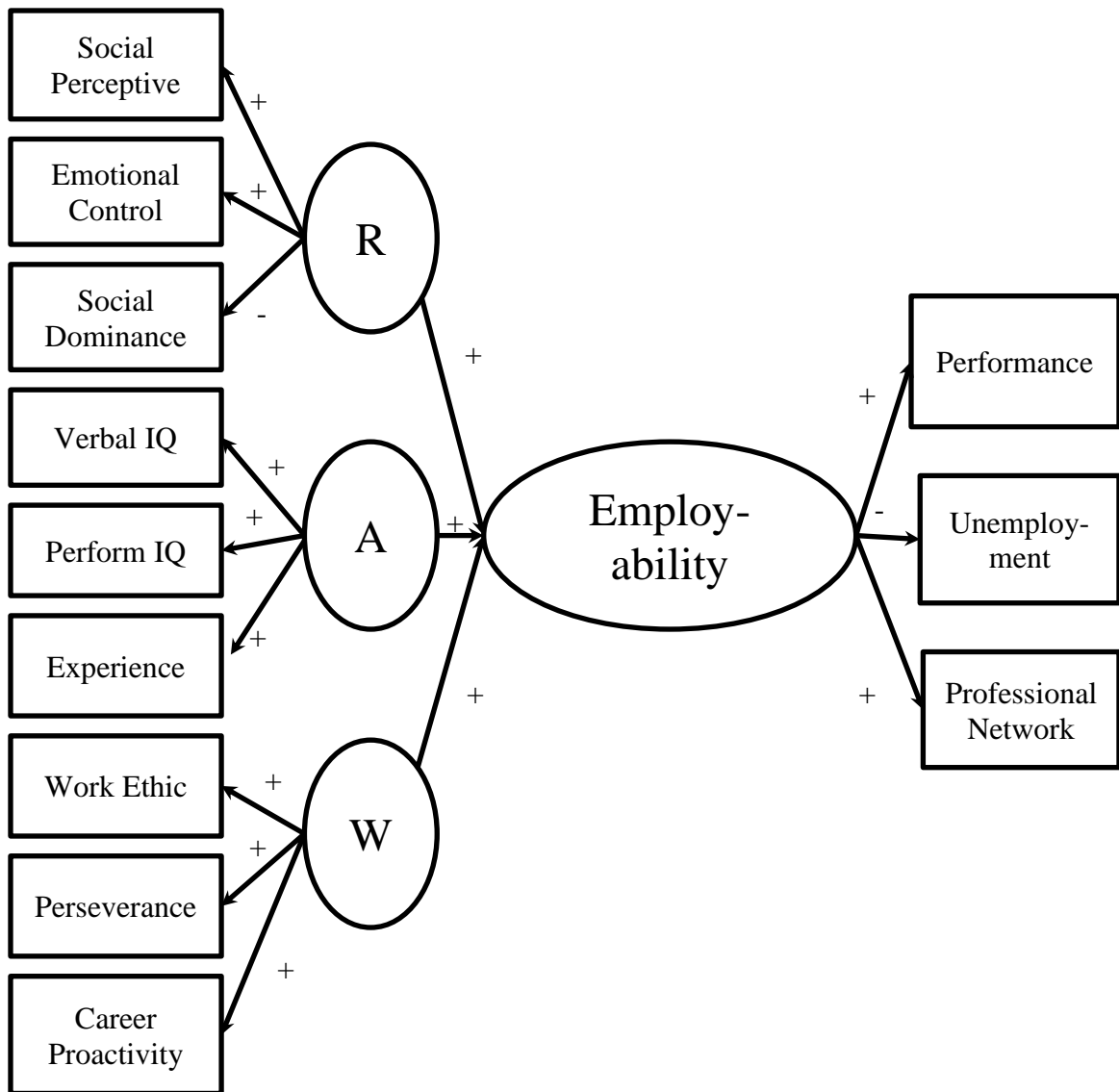


Figure 2. Hypothesized Model of Employability.

CHAPTER TWO

METHOD

Participants

All participants were at least 25 years old and recruited via SONA, the research management system used by the CSUSB psychology research department, email listings, or social media (Linked In, Facebook) utilizing a snowball sampling technique. Student participants, through the SONA system, were provided incentive (extra credit points) at their instructor's discretion. A total of 328 (263 = females, 65 = males) participants met the criteria for inclusion in this study (see Data Screening section below). Number of participants (sample size) was determined based on Bentler & Chou's (1987) suggestion of the ratio of ten participants per free parameter (10:1). Based on the number of free parameters, 26 in this study, a minimum of 260 participants were needed to obtain accurate parameter estimates.

Participant age ranged from 25 years old to 71 years old with an average age of 31 years old. Of the participants, 49% were Hispanic and 34% were White. Of the participants, 43% worked part time, 36% worked full time, 13% were unemployed and not seeking work, and 8% were unemployed and seeking work. The majority (77%) had at least an associate or vocational degree and felt that their last performance evaluation was fair (90%). Additionally, 63% felt they were in transitory jobs while 37% felt their jobs were part of their career plans.

Measures

Ability

Verbal and Performance IQ. Verbal and performance IQ were measured using the verbal reasoning test from the Employee Aptitude Scale (EAS) (Grimsley, Ruch, Warren, & Ford, 1956), and the Advanced Progressive Matrices (APM) Short Form (Bors & Stokes, 1998). The verbal reasoning dimension of the Employee Aptitude Scale (EAS) consists of one sample item and six test items. Each test item contains one scenario along with five questions, with a range of zero to thirty. For each item, a list of facts is presented followed by a list of conclusions. Participants decide whether each conclusion is true, false, or uncertain based on the facts presented. The EAS was reviewed in the 14th edition of the Buros Mental Measures Yearbook and has been found to be comparable to other multifactor ability batteries such as the General Aptitude Test Battery (GATB) and the Armed Services Vocational Aptitude Battery (ASVAB) (Engdahl, 2001). In this study reliability (alpha) was .80. The Advanced Progressive Matrices (APM) Short Form (Bors & Stokes, 1998) contains two instructional items and twelve test items with scores ranging from zero to twelve. The APM Short Form was designed to reduce the amount of time needed to complete the test. The original APM consisted of 36 items, with 12 instructional items and took an hour to administer. Bors and Stokes were able to reduce administration time to 10 minutes with their short version. The reliability for this sample was $\alpha = .45$.

Experience. Work experience was measured as the number of years and months the participant has in his/her occupation in which he/she received his/her most recent performance evaluation.

Rewarding

Social Perceptiveness. Social perceptiveness was measured using Gilbert and Kottke's (2009) Social Perceptiveness Scale (SPS) which measures the degree to which an individual is aware of their social environment, including being aware of other's "needs, goals, and feelings," at both the individual and group levels. This scale consists of eight items. A sample item includes: "I show sensitivity and understand others' perspectives." Respondents answer items on a 5-point Likert type scale, ranging from 1 = strongly disagree to 5 = strongly agree. For this sample, the scale showed good reliability, $\alpha = .84$.

Managing One's Own Emotions. Managing one's own emotions was measured with Wong and Law's (2002) measure of managing emotions scale. This subdimension of their trait emotional intelligence scale measures the extent to which an individual is capable on controlling his/her own emotions when dealing with others. The scale consists of four items. A sample item is: "I am able to control my temper so that I can handle difficulties rationally." Respondents answer items on a 5-point Likert type scale, ranging from 1 = strongly disagree to 5 = strongly agree. For this sample, the scale showed good reliability, $\alpha = .87$.

Verbal Agressiveness. Verbal aggressiveness was measured with Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough's, 2006 measure

of social dominance. This scale was developed to measure behaviors stemming from self-aggrandizing motives. The scale consists of 11 items. A sample item is: "I demand explanations from others." Respondents answer items on a 5-point Likert type scale, ranging from 1 = almost never true to 5 = almost always true. For this sample, the scale showed good reliability, $\alpha = .83$.

Willing

Work Ethic. Work ethic was measured using the hard work subscale from Meriac, et al.'s (2013) multi-dimensional work ethic scale. This subscale consists of four items (e.g., working hard is the key to being successful.). This subscale has shown good internal consistency, reliability, $\alpha = .85$ to $.87$, in two student samples (Meriac, et al., 2013). Respondents answer items on a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. For this sample, the scale showed good reliability, $\alpha = .89$.

Perseverance. Perseverance was measured using the perseverance subdimension of Duckworth and Quinn's (2009) grit short form (GRIT -S). The perseverance subdimension of the GRIT-S consists of four items and measures one's perseverance of effort for long term goals. The perseverance dimension of the GRIT-S has shown acceptable internal consistency, reliability $\alpha = .78$. A sample item is, "setbacks don't discourage me." Respondents answer items on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. For this sample, the scale showed marginal reliability, $\alpha = .67$.

Work and Career Proactivity. Work and career proactivity were measured with three items from Fugate and Kinicki's (2008) dispositional measure of employability (DME). The work and career proactivity subdimension of the DME measures the tendency for one to stay abreast of developments in his/her line of work. This scale consists of three items, and has shown good internal consistency, reliability $\alpha = .82$. Respondents answer items on a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. For this sample, the scale showed good reliability, $\alpha = .90$.

Overall Performance. Overall performance was measured with one item. On a sliding scale ranging from poor to excellent, participants responded to the following question: "Thinking back to your most recent performance review/evaluation, please indicate on the sliding scale below the overall rating received by your supervisor/boss."

Employability

Professional Network Breadth. Breadth of professional network was measured using Bozionelos' (2003) Network Resources Scale (NRS). The NRS measures the extent to which one has relationship ties at work that help to promote one's career interests. This scale consists of six items and has shown acceptable internal consistency, reliability $\alpha = .77$, in a white collared worker sample (Bozionelos, 2003). Respondents answer items on a 5-point scale ranging from "completely disagree" to "completely agree." For this sample, the scale showed acceptable reliability, $\alpha = .78$.

Involuntary Unemployment. Length of involuntary unemployment (unemployed and seeking employment) was assessed by asking participants the following questions: Thinking back over the past 5 years, what is the longest period (in years and months) in which you were seeking employment and remained unemployed? Involuntary unemployment is defined as periods where you were unemployed and actively seeking work. Additionally, participants will respond to the following question to assess the number of unemployment periods over the past 5 years: How many times over the past 5 years have you been fired or terminated, or left a job because you knew you were going to be fired or terminated?

Job Complexity. As part of the sample demographics, job complexity was measured using the Revised Job Diagnostic Survey (RJDS). The RJDS measures five core job characteristics including skill variety, task significance, task identity, autonomy, and feedback. The RJDS offers information on how motivating a job is. This scale consists of ten items. Respondents answer items on a 7-point scale ranging from 1 = very inaccurate to 7 = very accurate. For this sample, the scale showed good reliability, $\alpha = .89$.

Demographics. For descriptive purposes, additional demographics collected consisted of sex, age, current employment status, job characteristics (job type, title, and career orientated or transitory), education level (freshman, sophomore, junior, senior, or graduate), and ethnicity. All items included in the survey can be found in Appendix A

Procedure

Participants were offered an electronic survey through Qualtrics. Participants were informed of the general purpose of the study. They were provided with an informed consent (see Appendix B) and asked to read and place a mark on the bottom, with the date to indicate agreeing to participate in this study. After agreeing to take part in this study, participants were then sent to the survey. Items within scales were randomized. Three careless response checks were placed throughout the survey. The importance of taking their time and answering honestly and accurately was stressed, and confidentiality of all responses was assured. Participants were allowed as much time as they needed to complete the survey for the majority of the scales. However, participants were allowed a maximum of 5 minutes to complete the verbal IQ logic scale, and 10 minutes for the performance IQ scale. A cautionary warning of these time limitations was provided. A debriefing statement was provided, and participants were thanked for their contribution to the study. Incentive in the form of extra credit was awarded at the instructor's discretion for student participants. All participants were treated in accordance with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2002).

Design and Analysis

SPSS was utilized to screen the data for the following assumptions: normality, linearity, and outliers. Missing data were also assessed using SPSS 22. MPlus, a statistical analysis software package, was used to analyze the

data, upon which structural equation modelling was performed to assess fit of the data to the model. Relationships among the variables of interest were also examined. Additional post hoc analysis included a review of the recommended model modifications to determine if adding or subtracting pathways would significantly improve the model fit.

CHAPTER THREE

RESULTS

The hypothesized model included predictors and indicators of employability. Employability was a latent variable with three indicators (job performance, unemployment length, and professional network). It was hypothesized that ability (a latent variable with three indicators-verbal IQ, performance IQ, and experience), willingness (a latent variable with three indicators-work ethic, perseverance, and work proactivity), and rewarding (a latent variable with three indicators-social perceptiveness, emotional control, and social dominance) directly predict employability.

Data Screening

Data were initially available from 901 participants. A total of 553 cases were excluded from the analysis because respondents were under 25 years of age ($N = 431$), incorrectly answered one or more of the inattentive check items ($N = 105$), or had invalid values for length of involuntary unemployment ($N = 17$). To examine potential patterns in missing values, a missing value analysis was conducted. Little's MCAR test ($\chi^2 = 49.98$, $p = .28$) revealed that the missing values are missing completely at random. No variables contained more than 1.1% of missing values. After removing these cases, 348 remained for screening for statistical normality.

The remaining data were screened for outliers and normality. A cutoff score of $z > 3.30$ or $z < -3.30$ and discontinuous from the data was used as the criterion for detecting univariate outliers. Using this criterion, a total of 19 univariate outliers were detected on one or more variables. These cases were excluded from the analysis. There were an additional seven cases that met the z-score cutoff criterion for exclusion, but failed to meet the discontinuity criterion and thus, these seven cases were retained in the data for analysis. To screen for multivariate outliers, Mahalanobis' distance was calculated for each case. Based on a χ^2 cutoff of 31.26, $p < .001$, and discontinuity from the data, one case was identified as a multivariate outlier, Mahalanobis' distance = 42.62 and discontinuous from the distribution. This case was excluded from the analysis. Based on an examination of distributions, many of the variables were skewed. Experience was positively skewed ($z = 13.33$) and kurtotic ($z = 12.39$), unemployment was positively skewed ($z = 14.14$) and kurtotic ($z = 11.33$), performance was negatively skewed ($z = -9.26$) and kurtotic ($z = 7.17$), work ethic was negatively skewed ($z = -9.15$) and kurtotic ($z = 4.20$), social perceptiveness was negatively skewed ($z = -6.20$) and emotional intelligence was negatively skewed ($z = -6.06$). Based on most of the sample consisting of college students, these variables are not expected to be normally distributed in this population and thus no transformations were considered.

Using the Bonferroni correction method and a $p < .01$, t-tests were conducted on the remaining data ($N = 328$) to determine whether there were

significant differences on the variables of interest between the community (N = 49) and student (N = 279) samples. Results indicated significant differences between the samples on four of the variables of interest. On average, the community sample had significantly higher scores on verbal IQ (M = 18.31, SD = 4.62) than the student sample (M = 14.28, SD = 4.11), $t(365) = -5.71$, $p < .001$, and represented a small-sized effect, $r = .09$. The community sample had significantly more experience (M = 103.55, SD = 91.43) than the student sample (M = 60.11, SD = 53.96), $t(326) = -4.60$, $p < .001$, and represented a very small-sized effect, $r = .06$. The community sample had significantly higher scores on work and career proactivity (M = 4.10, SD = .62) than the student sample (M = 3.79, SD = .84), $t(325) = -2.43$, $p = .016$, and represented a very small effect, $r = .02$. The community sample had significantly lower scores on work ethic (M = 4.00, SD = .72) than the student sample (M = 4.41, SD = .86), $t(326) = 3.61$, $p < .001$, and represented a very small-sized effect, $r = .04$. The community sample spent fewer months unemployed (M = 2.04, SD = 5.37) than the student sample (M = 9.08, SD = 13.09), $t(326) = 3.70$, $p < .001$, and represented a very small-sized effect, $r = .04$. Additionally, the community sample felt their jobs were significantly more enjoyable and meaningful (M = 5.37, SD = 1.08) than the student sample (M = 4.95, SD = .93), $t(326) = -2.87$, $p < .01$, and represented a very small-sized effect, $r = .02$. Although the community sample had significantly higher scores on verbal IQ, experience, and work and career proactivity, significantly lower scores on work ethic and months unemployed, and

significantly more meaningful jobs, the effect sizes were very small and not likely to influence the model's parameter estimates.

Demographics

The final sample consisted of 328 participants (community N = 49, student N = 279). See Table 1 for demographic breakdown by sample. The total sample was mostly female (80.2%), Hispanic (49.1%) and White (34.5%) and had some form of college education (97.3%). The average age was 31 years and ranged between 25 and 72 years old. Forty three percent worked part time, 36.3% worked full time, 8.2% were unemployed and searching for work, and 12.5% were unemployed and not searching for work. Most were in transitory jobs (63.1%) rather than career-oriented jobs, and 89.6% felt that their most recent performance evaluation was fair.

SEM Analysis Result

The hypothesized model was estimated using MPlus with MLR estimation - maximum likelihood estimate parameters that are robust to non-normality. Only marginal support was found for the hypothesized model, Satorra-Bentler scaled $\chi^2(48, n = 328) = 100.33, p < .001, CFI = .86, TLI = .81, RMSEA = .06, 95\% CI [.043, .075], SRMR = .06$. Correlations among variables of interest are presented in Table 2 and means, standard deviations and minimum and maximum values for each variable are presented in Table 3.

Table 1. Demographic Variables.

Variable	Total		Sample		Community	
	<i>n</i> = 328		<i>n</i> = 279		<i>n</i> = 49	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Sex						
Female	263	80.18	222	79.57	41	83.67
Male	65	19.82	57	20.43	8	16.33
Ethnicity						
Hispanic	161	49.09	154	55.2	7	14.29
White	113	34.45	76	27.24	37	75.51
African American	17	5.18	17	6.09	0	0
Asian	11	3.35	10	3.58	1	2.04
Native American	5	1.52	4	1.43	1	2.04
Middle Eastern	5	1.52	4	1.43	1	2.04
Multi-ethnic	16	4.88	14	5.02	2	4.08
Education Level						
High School Diploma	9	2.74	5	1.79	4	8.16
Some college	68	20.73	58	20.79	10	20.41
Assoc./Voc. Degree	200	60.98	187	67.03	13	26.53
Bachelors Degree	38	11.59	29	10.39	9	18.37
Masters Degree	11	3.35	0	0	11	22.45
Doctorate (Ph.D.)	2	61	0	0	2	4.08
Employment Status						
Full Time	119	36.28	86	30.82	33	67.35
Part Time	141	42.99	131	46.95	10	20.41
Unemployed-Searching	27	8.23	25	8.96	2	4.08
Unemployed-Not Searching	41	12.5	37	13.26	4	8.16
Job Status						
Career	115	36.86	84.00	31.28	31.00	64.58
Transitory	197	63.14	180.00	68.18	17.00	35.42
Performance Rating						
Fair	294	89.63	252.00	90.32	42.00	85.71
Unfair	34	10.37	27.00	9.68	7.00	14.29

Table 2. Correlations Between Variables of Interest

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Verbal IQ	.80											
2. Performance IQ	.31**	.45										
3. Experience (Months)	.15**	.01	-									
4. Social Perceptiveness	-.02	-.05	-.05	.84								
5. Emotional Control	-.12*	.01	0.07	.40**	.87							
6. Social Dominance	.12*	.10	-.02	-.17**	-.19**	.83						
7. Work Ethic	-.24**	-.16**	-.08	.20**	.15**	-.03	.89					
8. Perseverance	-.16**	-.08	.08	.39**	.42**	-.10	.43**	.67				
9. Proactivity	-.02	-.07	.06	.36**	.17**	.00	.22**	.41**	.90			
10. Performance	.03	.08	.08	.17**	.15**	-.08	.00	.16**	.20**	-		
11. Unemployment (Months)	-.14*	-.07	-.14**	.00	-.04	-.02	.03	-.03	-.01	-.01	-	
12. Professional Network	0.09	.00	.22**	.17**	.17**	-.03	.13*	.22**	.28**	.15**	-.10	.78

Note. Scale reliabilities on the diagonal. * Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

Table 3. Means, Standard Deviations, Minimum and Maximum Values

Variable	Mean	SD	Min	Max
1. Verbal IQ	14.88	4.77	2.00	29.00
2. Performance IQ	3.76	1.86	0	9.00
3. Experience (Months)	66.60	62.80	0	303.00
4. Social Perceptiveness	4.52	.44	3.00	5.00
5. Emotional Control	3.91	.85	1.00	5.00
6. Social Dominance	2.56	.68	1.00	4.27
7. Work Ethic	4.35	.76	1.75	5.00
8. Perseverance	4.10	.63	2.25	5.00
9. Proactivity	3.84	.81	1.00	5.00
10. Performance	89.61	9.62	49.00	100.00
11. Unemployment (Months)	8.02	12.5	0	54.00
12. Professional Network	3.81	.81	1.00	5.00

In an attempt to develop a better fitting model to the data, post hoc modifications were performed based on modification indices while remaining theoretically relevant and meaningful. Based on theoretical relevance and model modification indices, three residual covariance paths were estimated. A residual path was added between verbal IQ and performance IQ. This non-directional path was added because of the shared factor of general intelligence included in all measures of intelligence (Spearman, 1904). The non-directional path between residuals for social perceptiveness and work proactivity was added as both involve being aware of one's surroundings. Social perceptiveness entails a social awareness where career proactivity entails an awareness of the business environment. Last, the non-directional path between the residuals for perseverance and experience was added as it would be expected that individuals

who persevere at something will spend more time on it, and thus gain more experience at it. Thus, time may be an underlying factor in both measures. Due to the addition of non-directional paths across latent constructs, examination of the residual variances for both models indicated error variance was reduced by the addition of these non-directional paths. The model was significantly improved with the addition of these residual paths, Satorra-Bentler χ^2 difference (1, N = 328) = 13.50, $p < .001$.

The final estimated model was an acceptable fit to the data, Satorra-Bentler scaled $\chi^2(46, N = 328) = 72.61, p < .001$, Robust CFI = .93, TLI = .90, RMSEA = .04 95% CI [.043, .075], SRMR = .05 and predicted employability from the RAW dimensions. Because post hoc model modifications were performed, a correlation was calculated between parameter estimates of the hypothesized and the estimates from the final model, $r(15) = .82, p < .001$. This high correlation is indication that the parameter estimates of the hypothesized model and the modified model are highly related. This evidence supports the modified model, as the model fit has improved without drastically changing the parameter estimates. The final model with standardized coefficients is shown in Figure 3.

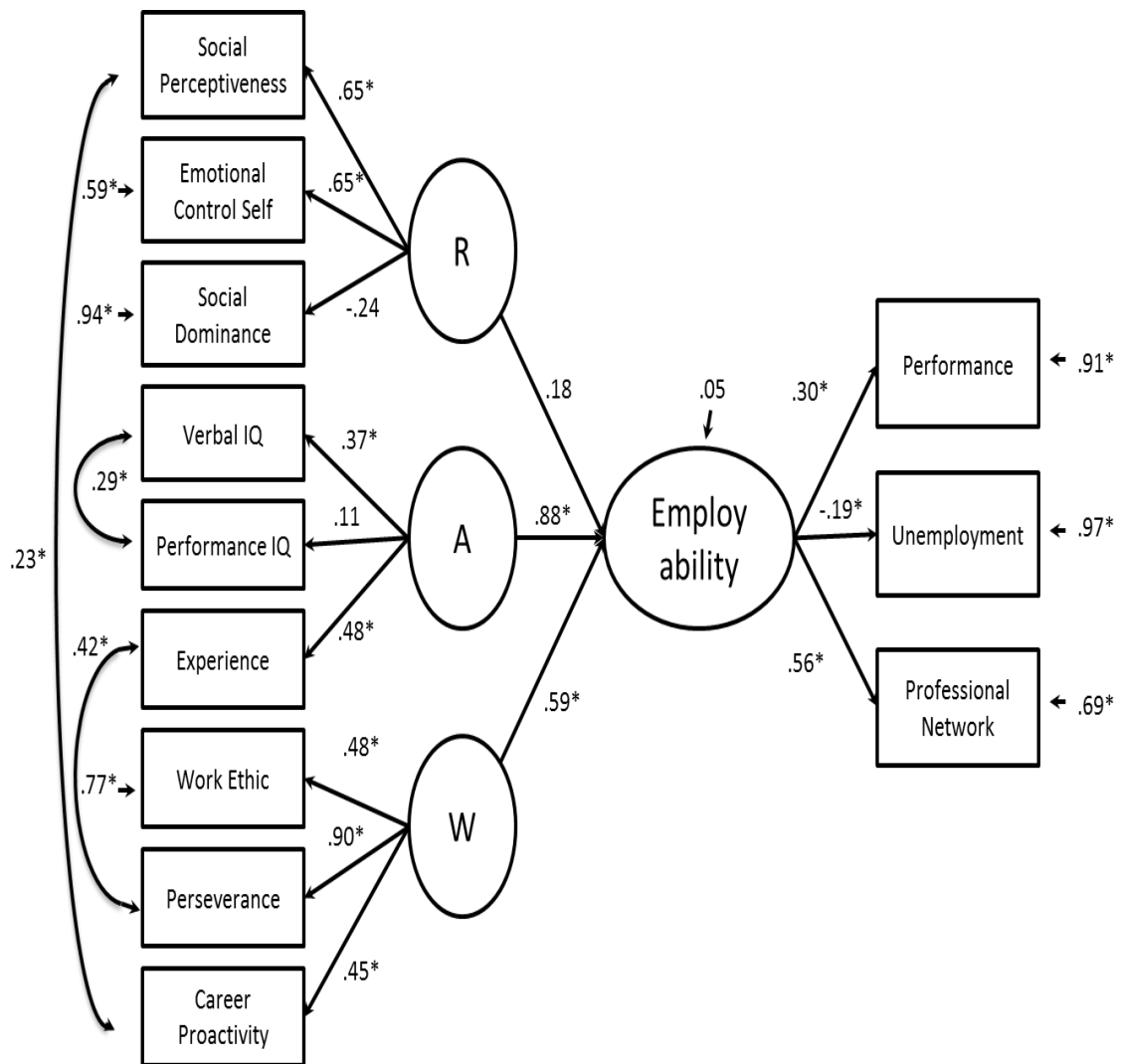


Figure 3. Final Estimated Model with Standardized Path Coefficients.

Test of Directional Hypotheses

Hypothesis 1a was partially supported, ability was significantly related to verbal IQ ($b = 1.00$, $\beta = .37$, $p < .001$) but not performance IQ ($b = .12$, $\beta = .11$, $p = .26$). Hypothesis 1b was supported, ability was significantly related to job

experience ($b = 17.38$, $\beta = .48$, $p < .01$). Hypothesis 2 was supported, ability was significantly related to employability ($b = 23$, $\beta = .88$, $p < .001$). Hypothesis 3 was supported, rewarding to work with was significantly related to social perceptiveness ($b = .53$, $\beta = .65$, $p < .001$) and managing one's own emotions ($b = 1.00$, $\beta = .65$, $p < .001$), and social dominance ($b = -.30$, $\beta = -.24$, $p = .001$). Hypothesis 4 was not supported, rewarding to work with was not significantly related to employability ($b = .15$, $\beta = .18$, $p = .46$). Hypothesis 5 was supported, willingness to work hard was significantly related to work ethic ($b = 1.00$, $\beta = .48$, $p < .001$), perseverance ($b = 1.55$, $\beta = .90$, $p < .001$), and work proactivity ($b = 1.01$, $\beta = .45$, $p < .001$). Hypothesis 6 was supported, willingness to work hard was significantly related to employability ($b = .74$, $\beta = .59$, $p < .01$). Hypothesis 7 was also supported, employability was significantly related to performance ($b = 6.38$, $\beta = .30$, $p < .01$), breadth of professional network ($b = 1.00$, $\beta = .56$, $p < .001$), and length of unemployment ($b = -5.25$, $\beta = -.19$, $p = .03$).

The predictive power for managing one's own emotions, verbal IQ, work ethic, and network resources were not estimated as they were used as marker variables for the latent variables rewarding, ability, willingness to work hard, and employability, respectively, and fixed to one (1). In regards to the remaining variables, rewarding to work with significantly predicted all three rewarding indicators. For every unit increase in rewarding to work with, there is an associated .55 unit increase in social perceptiveness, and a .30 unit decrease in verbal aggression. Ability significantly predicted two of the indicators, verbal IQ

and experience, but did not significantly predict performance IQ. For every unit increase in ability there is an associated .20 unit increase in performance IQ and a 3.3 month increase in experience. Willingness to work hard significantly predicted all three indicators of willingness. For every unit increase in willingness to work hard there is an associated 1.55 unit increase in perseverance and a one unit increase in work and career proactivity. Ability and willingness to work hard were significantly predicted by employability but rewarding to work with was not. For every unit increase in employability there is an associated .23 unit increase in ability, a .15 unit increase in being rewarding to work with, and a .74 unit increase in willingness to work hard. Employability was a significant predictor of all three indicators. For every unit increase in employability, there is an associated .30 increase in performance and a .19 unit decrease in length of unemployment. Nearly all (95.2%) of the variability in employability was accounted for by the RAW model.

CHAPTER FOUR

DISCUSSION

Summary of Findings

The purpose of this study was to test the RAW model of employability in its entirety by examining how individual differences contribute to being rewarding to work with, having the ability to do the job, and being willing to work hard, and how these three dimensions of the RAW model relate to being employable, indicated by performance ratings, length of unemployment, and professional network breadth.

Consistent with previous studies, ability significantly predicted employability. These findings are consistent with the idea that capable and experienced people will have an easier time finding and keeping a job, and thus spend less time between jobs and perform better while on the job. This study revealed that experience (biodata information) was a better indicator of one's ability to do the job compared to measures of intelligence, as indicated in the model. Further, this study also supports previous findings showing one's ability to be the single best predictor of career success (Schmidt & Hunter, 1998). However, measures of intelligence have presented problems in the past (Cottrell, Newman, & Roisman, 2015), as minority groups tend to score lower on these tests, resulting in adverse impact. The presence of adverse impact can then result in increased litigation against employers. Therefore, it is important for organizations to have strong evidence, via job analysis procedures, to fully

support the need for intelligence measures. Further, organizations may want to consider including other selection tools that are adverse impact neutral.

Also consistent with previous findings (Chen & Lim, 2012; Duckworth & Quinn, 2009), the work motivation---willing to work hard---component of the RAW model, predicted employability. Willingness was the second-best predictor of employability in this model, consistent with the idea that people who have a stronger work ethic, persevere, and are proactive in seeking out opportunities for advancement will perform better on the job, spend less time unemployed, and have a larger network for resources needed in finding new employment when necessary.

Interestingly, in this study, being more rewarding to work with was not predictive of being more employable. These findings suggest that, although many job listings indicate the need for strong interpersonal skills, this skill set may not play a significant role in being employable or that it may not be assessed in performance ratings, at the interview stage, or by peers or coworkers for future resources. Additionally, many participants in this study (63%) were in transitory jobs rather than career-oriented jobs. Thus, the lack of significant findings relating interpersonal dispositions to employability, may be due to a lack of concern with creating and maintaining relationships with coworkers, customers, or clients because workers in transitory jobs may not see themselves in their current line of work for very long. Finally, another potential explanation for the lack of findings may be that employers are telling researchers and job-seekers

that they want employees who work well with others, but they are not actually rewarding employees for this behavior (cf. Kerr, 1995) nor assessing it systematically in performance reviews.

Theoretical and Practical Implications

Employability is a social construct that is dynamic, complex, and multifaceted. Because of this, structural equation modelling was used to assess employability at the construct level, allowing for comprehensive and concurrent testing of all variables. This made it possible to test the RAW framework in its entirety. As this is the first empirical test of the RAW model of employability, this research helps by adding to the growing body of knowledge on employability and career success. The present study found partial support for Hogan et al.'s RAW model of employability, which had previously only been theoretical in nature. This could have significant impact to future research on employability, as results suggest that being able and willing to do the job may be necessary conditions across all types of jobs, but being rewarding to work with may not. This suggests that there exists the presence of a boundary condition to the RAW model of employability.

For many organizations, the performance management and selection processes continue to be disjointed. Organizations need to both select and reward employees for the behaviors that they claim to be necessary for the job, revealed through a job analysis. As mentioned previously, many job postings list interpersonal skills as necessary, but it is hard to know if they actually select or

reward employees based on those traits. The skills gap will persist in as much as interpersonal skills continue to be undervalued and underrepresented, or even unrepresented, in the performance evaluation and recruitment and selection processes. In the highly valued structured interview process, interpersonal skills may no longer be evaluated as these skills may go unrecognized by the interviewer as not to introduce bias into the process. Thus, HR may need to ensure that these often-requested skills be evaluated not just for performance evaluation purposes, but from the very beginning in the recruitment and selection processes, either using standard interview questions or assessment tools that can assess these criteria.

As mentioned previously, a diverse and multifaceted selection process is recommended. If an organization should choose to utilize cognitive ability assessments, knowing that ability is a significant predictor of performance on the job, they should also consider the use of training and experience evaluations (Gatewood, Feild, & Barrick, 2016), and possibly weight them higher in the process, as a means of avoiding litigation procedures that may occur from the potentially unjustified use of cognitive ability tests.

None of this is to say that other components of the RAW model are not important: it would still behoove employers to examine working well with others utilizing some selection criteria or assessment technique. If these are found to be job-relevant skills, employers should either develop or purchase an assessment that will meet their needs. This should also be carried into the performance

review process; to determine whether employees are working well with coworkers to meet desired productivity levels, a new approach to measuring the dimension for evaluation of performance may be necessary, especially in the current knowledge and service-based economy. In a service-based economy, working well with others is likely more important than ever. Technology is commonplace in organizations today and being technologically savvy does not set any one person apart in the selection process, rather their ability to work well with a client, understand their needs, collect the requirements, and provide the service or deliverable that they needed, is much more important. Employers that believe this to be true would do well to pursue including it in their selection and performance management systems.

Although we might think that being rewarding to work with is important, results from this study indicate that it may not currently contribute to higher levels of employability. Individuals interested in increasing their employability skills may seek ways to gain experience or increase knowledge in the desired field through online training, going back to school, or by taking either paid and/or unpaid internships. Gaining experience through internships are especially important to being employable in any economy and may be instrumental in increasing employability by gaining knowledge and hands on experience on the job (Schoenfelt, Stone, & Kottke, 2013).

Limitations

There were several limitations to this research. First, self-report methodology was used to measure all major constructs of interest. According to researchers, using self-report measures on constructs, such as personality variables, can produce problems resulting from common method variance and social desirability (Podsakoff & Organ, 1986).

Second, we cannot assume that the performance ratings given are a complete measure of the workers' performance or that they are even accurate, given that they were provided by the participant, and not directly from their supervisor. Although organizations are increasingly utilizing 360-degree feedback, which gives voice to coworkers, clients, customers, and the employee, in the performance evaluation process, many of these programs require improvement to accurately measure an employee's overall performance (Morgeson, Mumford, & Campion, 2005). In an environment where the nature of jobs is constantly changing (Barley, Bechky, & Milliken, 2017), it can be difficult, especially for large organizations, to maintain and update job analyses for their positions, that could then be utilized to update their performance management systems.

Third, these findings may simply reflect the sample used in the study, which consisted of individuals from a variety of different job types, with some jobs requiring more interaction with coworkers, customers, and/or clients than other jobs. Although previous research has found consistent positive relationships

between IQ and performance, and experience and performance, regardless of job type (Schmidt & Hunter 2004), it is unclear whether the same holds true for the indicators of being rewarding to work with.

Finally, although this study did not find significant results for the relationship between being rewarding to work with, this is the first test of the RAW model of employability and may be considered a test of the prototype for the RAW model of employability. Further, the sample used in this study not only consisted of majority of the participants holding transitory jobs, the jobs that many held were part time (43%), which may reflect the mostly student and female sample used in this study, as women tend to work part-time jobs more often than men (Kalleberg, 2000).

Future Research

There are many potential avenues for future research, ranging from examining unique populations to utilizing different measures and research techniques. First, future research might focus on jobs that require more interaction with other employees and/or focus on a specific population of workers (e.g., jobs with group work roles), such as those in the service industry.

Much like the need to seek out 360-degree feedback during performance evaluations, future research focused on personality may wish to seek alternate measures, such as multi source (e.g., peer/coworker) ratings of such variables. Additionally, future research should focus on a population of workers who are in jobs that are related to their long-term career goals, as workers in career

orientated positions may find those interpersonal connections more valuable for resources important to career advancement. Further, if performance is evaluated it would be ideal to obtain the ratings directly from the source providing them or with organizational archival data, rather than from the subject of the ratings. It was decided not to test the interaction effects of the model due to the difficulties in analyzing moderating effects in SEM. Future research might utilize regression analysis with moderation to investigate the proposed interactive effects of the three dimensions of the RAW employability model.

Last, additional boundary conditions may apply and should be included in future research on this model. The RAW model assumes good fit between the person and the organization (PO fit) which may also include person-job fit, person-supervisor fit, and person-group fit, as prior research has revealed moderate effects of PO fit on employee performance (Kristof-Brown, Zimmerman, & Johnson, 2005). As the current study was focused on individual differences, factors external to the individual were not addressed. Thus, future research should include PO fit as a contextual factor when investigating the RAW model.

Conclusion

With the understanding that psychology researchers have called for an increase in theory testing rather than continuing with new theory development (Aguinis & Vandenberg, 2016), the most important implication of this research is that this is the first empirical test of the RAW model of employability in its entirety.

Although components of the RAW model, especially the 'A' aspect, have previously been tested, no one, to the best of my knowledge, has tested the model comprehensively.

With this study, it has been demonstrated that the RAW model of Hogan et al.'s (2013) can be tested in its entirety. Support of the hypothesized model demonstrates the importance of having higher levels of ability and motivation in finding and keeping a job in the current market. Results indicate that the dimensions can be assessed and at least two (A, W) are indicative of employability. However, being more rewarding to work with may not be as important as the other two factors across a variety of job types and where most participants are in transitory, rather than career-oriented jobs. Thus, for this population, the model appears to be driven by the ability and willingness dimensions of the RAW framework. That the R dimension did not relate to overall employability may be a function of the types of jobs participants held or could represent that employers do not adequately evaluate teamwork on the job.

APPENDIX A
SCALES

Demographics

Sex:

Male Female Decline to State

Ethnicity:

Asian, Asian American, Asian-Pacific or Pacific Islander

Black/African American

Middle Eastern

Native American

Hispanic or Latino/Latina

White/Caucasian, European, not Hispanic

Other (please specify)

Age: _____

Current Employment Status:

Currently employed full time (30 hours or more per week)

Currently employed part time

Not currently employed, but I am actively seeking employment

Not currently employed, and NOT seeking employment

Education Level:

Please choose the option that best described your education level:

Less than High School

High School Diploma

Some College

Associate or Vocational Degree

Bachelor's

Master's (MA/MS)

Professional Degree (MD, JD)

Doctorate (Ph. D. / Ed.D.)

Job Characteristics:

Job Type:

What industry/business do you work in? Please select only one.

Architecture and or Engineering Legal

Arts and/or Design

Life, Physical, and/or Social Science

Building and/or Grounds Cleaning

Management

Business and/or Financial

Math

Community and/or Social Service

Media and/or Communication

Computer and/or Information Technology

Military

Construction and/or Extraction

Office and/or Administrative Support

Education, Training, and/or Library

Personal Care and/or Service

Entertainment and/or Sports

Production

Farming, Fishing, and/or Forestry

Protective Service

Food Preparation and/or Serving

Sales

Healthcare

Transportation and Material Moving

Installation, Maintenance, and/or Repair

Other (please specify)

Job Title: _____

This job is:

Part of my long-term career plan/goals

Transitory (e.g., not related to my career goals, but merely a means of income)

Revised Job Diagnostic Survey (Idaszak & Drasgow, 1987)

Please read each statement carefully and then use the rating scale below to indicate the accuracy of each statement as it pertains to your current or most recent job.

1 = *very inaccurate* and 7 = *very accurate*

The job requires me to use a number of high level or complex skills

The job is simple and repetitive

The job gives me the opportunity to completely finish the pieces I work on

The job is one where a lot of other people can be affected

The job is one where a lot of people can be affected by how well the job gets done

The job itself is very significant and important in the broader scheme of things

The job gives me the chance to use my personal initiative and judgement in carrying out the work

The job gives me considerable opportunity for the independence and freedom in how I get the work done

Just doing the work required by the job provides many chances for me to figure out how well I am doing at that job

After I finish a job or a task in my job I know whether I performed well or not

Careless Response Checks

The following careless response checks will be dispersed throughout the survey.

“If you are reading this item, please respond with Very Inaccurate”

“If you are reading this item, please response with Strongly Agree”

“If you are reading this item, please leave it blank”

Length of Unemployment

Length of unemployment will be measured with one item as follows:

Thinking back over the past 5 years, what is the longest period of time in which you were involuntarily unemployed (seeking work and remained unemployed)? Please do not include time periods when you were voluntarily unemployed (e.g., taking time off from work for personal reasons, such as schooling).

Years _____ Months _____

Periods of Unemployment

Periods of unemployment will be measured with one item as follows:

How many times over the past 5 years have you been fired or terminated, or left a job because you knew you were going to be fired or terminated?

Self-Report Measure of Performance

Performance will be measured with one item and include two follow up questions (to obtain more truthful and accurate answers) which allows the participant to explain his/her perceived reason for this performance rating as follows:

Thinking back to your most recent performance review/evaluation, please indicate on the sliding scale below the overall rating received by your supervisor/boss.

Poor-----Excellent

Do you feel this was a fair assessment of your performance?

Yes

No

Please explain why you feel you received this rating?

Self-Report Measure of Experience

Please indicate the amount of experience you have in the line of work related to the above performance evaluation in years and months. For example, if you have two years and four months experience in this field, you would indicate this by putting a 2 in years and a 4 in months.

Years _____ Months _____

Network Resources Scale (Bozionelos, 2003)

Please read each statement carefully and then use the rating scale below to indicate the extent to which the various statements describe you.

1 = *completely disagree* and 5 = *completely agree*

There are individuals within the organization with whom I share emotional support, feedback, and work confirmation

There are individuals in the organization whom I consider my best friends and share any kind of issue, professional or personal

There are individuals in the organization with whom I frequently talk about work related topics.

I personally know a number of people who occupy important posts in the organization.

I keep in touch with a number of people who are at higher levels than I am.

I have a network of friendships in the organization that can help to further my career progression.

Verbal Reasoning Test from the Employee Aptitude Scale (EAS) (Grimsley, Ruch, Warren, & Ford, 1956)

The following test is a logic test. Please read the instructions for the sample problem below and complete the following 6 problems in a similar fashion. Please spend no more than 5 minutes on these logic problems.

In the example below, the facts say that Chris is a widow, and that Company X employs no women. The fact that Chris is a widow means that she is a woman and so could not work for Company X, which does not hire women. Therefore, the first conclusion is definitely true, so you would choose alternative “T.” The facts also say that Chris’ only child is a girl, which means that her son could not be ill since she has no son. Therefore, the second conclusion is definitely false, and you would choose alternative “F.” From the facts that are given, there is not enough information to know definitely where Chris works. She does not work for Company X because that company hires no women. It is possible that she works for Company Z, but it is also possible that she works somewhere else. Therefore, the third conclusion is uncertain, and so you would choose alternative “X.” The remaining two conclusions would be evaluated in a similar fashion.

SAMPLE PROBLEM

FACTS	Chris is a widow	T = Definitely True
	Jane works for Company Y	F = Definitely False
	Chris’ only child is a girl	X = Uncertain
	Company X makes spark plugs	

Company X employs no women

CONCLUSIONS

- | | | | |
|---|---|---|------------------------------------|
| T | F | X | Chris does not work for Company X. |
| T | F | X | Chris' son is ill. |
| T | F | X | Chris works for Company Z. |
| T | F | X | Chris has never been married. |
| T | F | X | Chris inspects spark plugs. |

On the following pages there are logic problems similar to the previous example. Read the facts and evaluate the conclusions that are presented. Choose the answer that corresponds to your answer.

T = Definitely True, F = Definitely False, and X = Uncertain.

T = Definitely True F = Definitely False X = Uncertain

- FACTS Mr. J does not smoke.
- Mr. K and all of his friends do smoke.
- Mr. K is not an aviator.
- Mr. K has a friend who is an aviator.

CONCLUSIONS

- | | | | |
|---|---|---|------------------------|
| T | F | X | Mrs. J does not smoke. |
| T | F | X | Mrs. J is a smoker. |
| T | F | X | All aviators smoke. |
| T | F | X | Some aviators smoke. |

T F X Mrs. J is an aviator.

FACTS Everyone living on the Farm is related to Mrs. Doe.

Hiram Ross has no children.

Elias Biggers is Mrs. Doe's brother.

Joseph Anthony lives on the Farm.

Mrs. Doe has a son in the Navy.

CONCLUSIONS

T F X Hiram Ross lives on the Farm.

T F X Joseph Anthony is related to Mrs. Doe.

T F X Elias Biggers lives on the Farm.

T F X Hiram Ross does not live on the Farm.

T F X Mrs. Doe lives on the Farm.

FACTS All houses on Elm Street are rented.

McNickel rents his house.

Rafferty does not own a home.

Meyer lives on Elm Street.

All houses on Elm Street are modern.

CONCLUSIONS

T F X Myer lives in a modern house.

T F X Rafferty lives in a farm house.

T	F	X	McNickel lives on Elm Street.
T	F	X	Myer is a good musician.
T	F	X	Myer rents his house.

FACTS All of the boats on Red River are sailboats.

 Some of Robertson's boats are on Lake Bluewater.

 Jones owns a motor boat.

 Every boat Smith owns is on Red River.

 Most of Robertson's boats are motor boats.

CONCLUSIONS

T	F	X	Some of Robertson's boats are on Red River.
T	F	X	Robertson has no boats on Red River.
T	F	X	Smith owns no sailboats.
T	F	X	Jones has no boats on Red River.
T	F	X	Smith owns no motor boats.

FACTS The school is bigger than the church.

 The church is smaller than the railway station.

 The railway station is bigger than the post office.

 The church is the same size as the Elks Hall.

CONCLUSIONS

T	F	X	The Elks Hall is larger than the school.
---	---	---	--

T	F	X	The school and the post office are the same size.
T	F	X	The school is smaller than the railroad station.
T	F	X	The Elks Hall is larger than the post office.
T	F	X	The post office is smaller than the Elks Hall.

FACTS Mary is older than Jack.

 David is not younger than Roger.

 Jack is younger than Betty.

 Betty is not older than Roger.

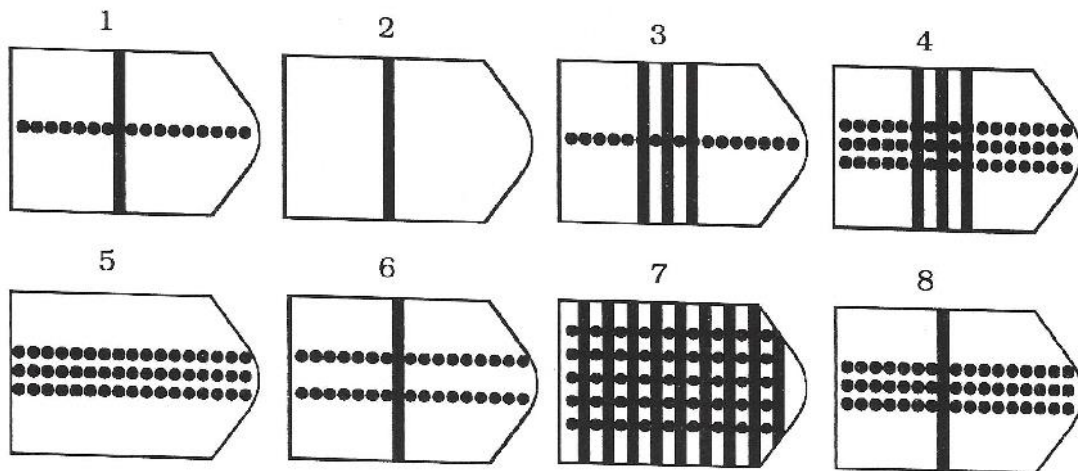
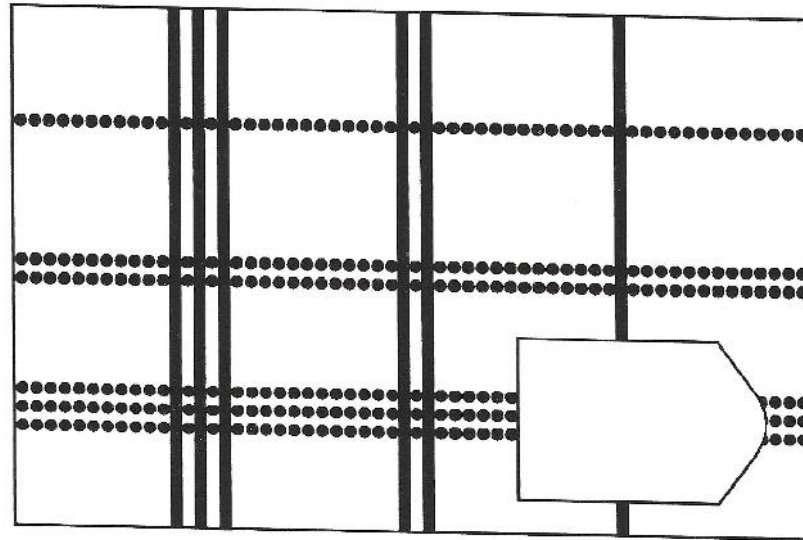
CONCLUSIONS

T	F	X	Betty is not older than Mary.
T	F	X	Jack is not younger than David.
T	F	X	Roger is not the same age as Mary.
T	F	X	Jack is not older than Roger.
T	F	X	Betty is younger than Roger.

Advanced Progressive Matrices (APM) Short Form (Bors & Stokes, 1998)

Sample item

1



Social Perceptiveness Scale (Gilbert & Kottke, 2009)

Please read each statement carefully and then use the rating scale below to indicate the extent to which the various statements describe you.

1 = *strongly disagree* and 5 = *strongly agree*

I show sensitivity and understand others' perspectives.

I am attentive to emotional cues and listen well.

I am able to recognize different emotions in myself and others.

I encourage understanding points of view of other people.

I respect and relate well to people from varied backgrounds.

I seek mutual understanding and welcome sharing of information.

I understand diverse worldviews and am sensitive to group differences.

I show concern for others' needs.

Managing Emotions in Self (Wong & Law, 2002)

Please read each statement carefully and then use the rating scale below to indicate the extent to which the various statements describe you.

1 = *strongly disagree* and 5 = *strongly agree*

1. I am able to control my temper so that I can handle difficulties rationally.
2. I am quite capable of controlling my own emotions.
3. I can always calm down quickly when I am very angered.
4. I have good control of my own emotions.

Dominance Scale (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough, 2006)

Please read each statement carefully and then use the rating scale below to indicate the extent to which the various statements describe you.

1 = *strongly disagree* and 5 = *strongly agree*

I try to surpass others' accomplishments.

I try to outdo others.

I am quick to correct others.

I impose my will on others.

I demand explanations from others.

I want to control the conversation.

I am not afraid of providing criticism.

I challenge others' points of view.

I lay down the law to others.

I put people under pressure.

I hate to seem pushy.

Work Hard (Meriac, Woehr, Gorman & Thomas, 2013)

Please read each statement carefully and then use the rating scale below to indicate the extent to which the various statements describe you.

1 = *strongly disagree* and 5 = *strongly agree*

Working hard is the key to being successful.

If one works hard enough, one is likely to make a good life for oneself.

If you work hard you will succeed.

Anyone who is able and willing to work hard has a good chance of succeeding.

Perseverance - Short Grit Scale (Duckworth & Quinn, 2009)

Please read each statement carefully and then use the rating scale below to indicate the extent to which the various statements describe you.

1 = *strongly disagree* and 7 = *strongly agree*

I finish whatever I begin.

Setbacks don't discourage me.

I am a hard worker.

I am diligent.

Work and Career Proactivity Scale (Fugate & Kinicki, 2008)

Please read each statement carefully and then use the rating scale below to indicate the extent to which the various statements describe you.

1 = *strongly disagree* and 5 = *strongly agree*

I stay abreast of developments in my company.

I stay abreast of developments in my industry.

I stay abreast of developments relating to my type of job.

APPENDIX B
INFORMED CONSENT



College of Social and Behavioral Sciences
Department of Psychology

Informed Consent

EMPLOYABILITY DIMENSIONS AND WORK RELATED OUTCOMES

You are requested to participate in a study designed to measure employability dimensions and outcomes. This study is being conducted by Daniell J. Study and Dr. Janet L. Kottke. Your participation requires approximately 30 minutes. Be assured no physical or psychological harm to participants any greater than that of daily living is expected. At your instructor's discretion, you may receive SONA points which can be used to fulfill a Psyc 100 requirement or as extra credit towards classes.

All information that you provide will be held in confidence by the researchers. At no time will your name be reported with your responses. Any identifying data is collected solely to apply extra credit points. Results of the data are reported in group form only. Results will be included in Daniell J. Study's Masters Thesis and may be included in a presentation to a conference or published in a scholarly journal. Data will be stored in a password protected computer only accessible to the researcher. All data will be destroyed after 5 years.

Your participation in this study is completely voluntary. You may choose to withdraw, or refuse to answer any specific question, at any time without penalty or loss of extra credit points to which you are otherwise entitled. Any additional questions about this study should be directed to Dr. Janet Kottke at jkottke@csusb.edu.

If you have any questions or concerns regarding this study, please feel free to contact the Department of Psychology IRB Subcommittee at Psyc.irb@csusb.edu. You may also contact the Human Subjects office at California State University, San Bernardino (909) 537-7588 if you have any further questions or concerns about this study.

This study has been approved by the department of Psychology Institutional Review Board (IRB) sub-committee, California State University, San Bernardino. The official psychology IRB stamp of approval should appear on this consent form. The university requires that you give your consent before participating in this study.

By marking the consent box, I acknowledge that I have been informed about and understand the nature and purpose of this study. I freely consent to participate. I also acknowledge that I am at least 18 years of age.

THANK YOU!

Place tick here: _____

Date: _____

CALIFORNIA STATE UNIVERSITY PSYCHOLOGY INSTITUTIONAL REVIEW BOARD SUB-COMMITTEE			
APPROVED	7-4/17	VOID AFTER	7/4/18
IRB #	H-17SU-02	COMMITTEE MEMBER	<i>[Signature]</i>



College of Social and Behavioral Sciences
Department of Psychology

Informed Consent

EMPLOYABILITY DIMENSIONS AND WORK RELATED OUTCOMES

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THANK YOU!

Place tick here: _____

Date: _____

CALIFORNIA STATE UNIVERSITY PSYCHOLOGY INSTITUTIONAL REVIEW BOARD SUB-COMMITTEE			
APPROVED	7-4/17	VOID AFTER	7/4/18
IBB #	H-17SU-02	COMMITTEE MEMBER	<i>[Signature]</i>

The California State University
Bakersfield • Channel Islands • Chico • Dominguez Hills • East Bay • Fresno • Fullerton • Humboldt • Long Beach • Los Angeles • Maritime Academy
Monterey Bay • Northridge • Pomona • Sacramento • San Bernardino • San Diego • San Francisco • San Jose • San Luis Obispo • San Marcos • Sonoma • Stanislaus

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