Pepperdine University

Pepperdine Digital Commons

Theses and Dissertations

2017

Exploration of the relationship between implicit theory of intelligence and employability

Alissa Tuschall

Follow this and additional works at: https://digitalcommons.pepperdine.edu/etd

Recommended Citation

EXPLORATION OF THE RELATIONSHIP BETWEEN IMPLICIT THEORY OF

INTELLIGENCE AND EMPLOYABILITY

_____

A Research Project

Presented to the Faculty of

The George L. Graziadio

School of Business and Management

Pepperdine University

_____

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

in

Organization Development

_____

by

Alissa Tuschall

August 2017

This research project, completed by

ALISSA TUSCHALL

under the guidance of the Faculty Committee and approved by its members, has been

submitted to and accepted by the faculty of The George L. Graziadio School of Business

and Management in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

IN ORGANIZATION DEVELOPMENT

Date: August 2017

Faculty Committee

Committee Chair, Terri D. Egan, Ph.D.

Committee Member Julie A. Chesley, PhD.

Deryck J. van Rensburg, Dean
The George L. Graziadio
School of Business and Management

Abstract

The world of work today calls for individuals to be active participants in designing their careers. This study focuses on the relationship between one's beliefs (mindset) about intelligence and employability. Quantitative data were collected using the implicit theory of intelligence (self-theory scale) from 75 participants of a high-technology company in San Jose, California. Participants were divided into two groups of mindsets, growth and fixed. Twenty participants were randomly selected for a semi-structured interview where qualitative data were gathered and analyzed. The study found that individuals with a growth mindset emphasize newness as a variable in their career decisions, look at their careers in the broader context of organizational impact, and are more likely to view their careers using their own lens. Alternatively, individuals with a fixed mindset are more likely to be influenced by other people in making career decisions. Also, the difference in mindsets does impact employability orientation.

Keywords: implicit theory of intelligence, mindset, employability, protean

Acknowledgments

This body of work would not have been possible without the participants; thank you for making this happen. Your openness to share your stories has inspired me and in times when I am not sure how to proceed, I am reminded of your curiosity and energy—it propelled me forward.

Thank you to my thesis advisor, Dr. Terri Egan. Your guidance, insight, and encouragement provided the learning that I craved. It has been a gift to spend this time with you.

To my manager, mentor, and colleagues: you have supported me during this journey and cheered me on as I explored this topic. Your thought partnership during this project is invaluable. Thank you.

To my friends who patiently listened to me while I thought out loud, who encouraged me when I had doubts, and who willingly tested the interview questions—all in the name of friendship—I am so lucky to have you in my life. Thank you.

Thank you to my father, Bellamy Kasim. Your passion in your career inspires me daily, and your belief in education motivated me to start this program—which was one of the best decisions of my life. Thank you for being my sounding board and for believing I can do anything.

To my husband, Bill Tuschall, who walked with me in this journey, side by side. Thank you for being my other half. Your sharp intellect and your loving soul carried me through this journey. I am eternally grateful for our life together. Thank you for making my dreams come true.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction

Steve Jobs said something incredibly poignant during Stanford University's 2005 commencement: "You can't connect the dots looking forward; you can only connect them looking backwards. So, you have to trust that the dots will somehow connect in your future" (Jobs, 2005). Was Steve Jobs' accomplishment as a leader a result of his career planning? Could people's mindsets and beliefs about their careers influence their journey?

Macroeconomics, globalization, and technology have influenced the world of work, especially in career planning. In the past, organizations owned career paths and provided employees with clarity of roles, job security, and long tenure. In turn, organizations could have full control of the skill development of their workforce. In the age of the Internet, the culture shifted to the employees taking charge of their own career paths. This shift provides employees with more autonomy and organizations with workforce flexibility (CEB Corporate Leadership Council, 2015).

Career scholars have studied the shift from organizational ownership of careers to individual ownership of careers. Hall first introduced the term protean in 1976 to describe "a career orientation where the person, not the organization, is in charge; where the person's core values are driving career decisions; and where the main success criteria are subjective (psychological success)" (Hall, 2004, p. 1). The opposite of a protean career is the traditional career in which the organization is in charge, and the focus of individuals is upward mobility within organizations. Career success is defined by one's position, level in the organization, and salary.

As a human resources (HR) professional, the researcher has sat down with individual employees to discuss their careers. Most of the time, the conversation starts

with the employees asking the researcher to show them their career paths. The researcher—who fundamentally believes that career choices are individually driven, much like the protean career theory—wanted to explore why is it that some individuals look to others to determine their career choices. Additionally, the researcher has worked in Silicon Valley for the past 18 years and found that most of the organizations have moved away from the traditional career, primarily due to the changes in the economy, developments in technology, and globalization. A recent research study shows

1. Upward, linear careers are unlikely to return. Flatter, matrix structures have helped organizations drive efficiencies, and that creates difficulty in providing upward mobility for employees. Seventy-three percent of heads of HR surveyed do not anticipate layers will be added in their organizational structure.

2. Current career designs become obsolete quickly. Only 18% of heads of HR surveyed believe that career design effectively adapts to changing needs.

3. Average tenure in positions has increased by more than 30% since 2010 (CEB Corporate Leadership Council, 2015).

As an individual, the movement towards taking charge of one's career could not have come at a better time. Organizations are desperate for capable talent. Seventy-five percent of organizations surveyed believe that they will face capability gaps in the next three to five years (CEB Corporate Leadership Council, 2015). Most organizations are working extensively to find ways to mitigate the future risks of the workforce.

Organizations are looking for employees who are employable as they are necessary for the organizations to meet the changing needs of the external environment (van Dam, 2004). The term employable or employability speaks to an employee's capabilities, skills, knowledge, experiences, achievements, and personal attributes that

make him or her more valuable internally and externally and, thus, more likely to achieve success in his or her career (CEB Corporate Leadership Council, 2015).

Research Objective and Approach

This study focuses its research on the individual aspect of career. It seeks to explore the relationship between the implicit theory of intelligence and employability. Does one's belief about intelligence impact one's employability?

Study Setting and Population

This study was conducted in one of the high-technology organizations in San Jose, California. The organization is 40 years old and is a market leader in semiconductor capital equipment. The average tenure in the organization is 12 years.

Definitions

For this study, the following terms are defined:

The implicit theory of intelligence (Dweck, 2006) refers to people's beliefs about their own intelligence and breaks them down into two types. A person with a fixed mindset believes that human qualities, such as intelligence, are fixed. Conversely, a person with a growth mindset believes that human qualities can be cultivated through effort.

Employability, for this study, is defined as "a constellation of individual differences that predispose individuals to (pro)active adaptability specific to work and careers" (Fugate & Kinicki, 2008, p. 503). Individuals with higher degrees of employability will be able to identify opportunities within and between organizations, making them adaptive. Individuals with higher degrees of employability also participate in competency development initiatives (De Vos, De Hauw, & Van der Heijden, 2011).

People with high degrees of employability are keen to develop themselves and can adapt their skills and knowledge to be proactive in the world of work and careers.

Implications of this Research

The world of work today is volatile, uncertain, complex, and ambiguous. This study will provide awareness to individuals so they can use themselves as instruments in their careers.

For an organization, employee career ownership is highly beneficial because it allows organizations to manage the diversity and complexity of today's careers at scale. However, the potential downsides for employee career ownership are

1. Employees do not design their own careers to build capabilities that meet changing organizational needs.

2. Employees have a lack of motivation and belief that career moves can help them advance.

This study suggests an approach to thinking about careers that increases the employability of the employee and the agility of the organization—creating a partnership.

Organization of Study

Chapter 2 explores the literature surrounding protean career theory, the implicit theory of intelligence, and employability. Chapter 3 highlights the study methodology and measurement tools. Chapter 4 reviews the findings, and chapter 5 provides study conclusions and interpretations, limitations, as well as further recommended research.

Chapter 2: Literature Review

This study explores the relationship between one's belief on intelligence and individual career attitudes and behaviors, and the subsequent relationship of those attitudes and behaviors to employability.

This literature reviews begins with an overview of protean career theory. Second, it discusses studies on individual beliefs as they relate to the implicit theory of intelligence. Third, it considers studies on the concept of employability. The chapter concludes with a summary of the findings in the literature review.

Protean Career Theory

Protean career theory describes a career where the individual is in charge, not the organization. The core values for a protean careerist are freedom and growth; the success criteria are subjective (i.e., psychological success) and not objective (i.e., fame, money, position) (Hall, 2004).

There are three main concepts derived from the literature review:

1. The competencies related to someone with a protean career orientation: continual learner, self-awareness, and adaptability.

2. The potential motivators for individuals with a protean career orientation.

3. The individual attributes (i.e., age, gender, education, managerial level) that might contribute to one's protean career orientation.

In 1997, Briscoe and Hall published a study that addressed the competencies associated with a protean careerist—adaptability and self-awareness. They found that competency models do not adapt fast enough to the changing business environment and recommended that organizations focus on developing adaptability and self-awareness of their employees. They suggest this "meta-competency" will equip employees to learn

from their own experience and develop any needed competencies on their own (discussed in Hall, 2004).

Briscoe and Hall developed the matrix in Figure 1, with an emphasis on the importance to develop both competencies.

Adaptability

Note. From "The Protean Career: A Quarter-Century Journey," by D. T. Hall (2004), *Journal of Vocational Behavior, 65*, p. 7. Copyright 2003 Elsevier Inc. Reprinted with permission of author.

Figure 1. Interactive Effects of Two Metacompetencies: Adaptability and Self-Awareness

In 2004, Hall added that a protean careerist is also a continual learner. He looked at a study done by Mintz in 2003 of 25 successful men who had major midlife career transformations. The main finding was that this group had significantly higher scores in openness to new experiences, one of the Big Five personality measures. Hall noted that this is "consistent with the concept of a protean careerist as one who is a continual

learner, always open to new possibilities and views the career as a series of learning cycles" (2004, p. 6).

Briscoe and Hall also developed an instrument to measure protean career orientation called the Career Orientation Index. The instrument found two main factors for a protean career orientation: values-driven (the extent to which the career decisions are driven by personal values) and self-directedness (the extent to which the person feels independent and in charge of his or her own career) (Hall, 2004).

In 2008, Segers, Inceoglu, Vloeberghs, Bartram, and Henderickx (2008) attempted to link potential motivators to the protean and boundaryless career attitudes. This study included the boundaryless career theory, as it was also an emerging career theory that was prevalent during this time in organizational literature. Additionally, there was limited research that connected individual attributes such as gender, age, education, managerial experience, industry sector, and culture to protean career orientation or boundaryless mindset. The study by Segers et al. attempted to address the gaps in career literature.

Segers et al. used the research done by Briscoe and Hall (2006) as the underlying basis in exploring the protean career orientation. The boundaryless career model, like the protean career theory, has two axes—physical mobility and psychological mobility. Physical mobility speaks to an individual's movement across jobs, organizations, occupations, and countries. Psychological mobility speaks to the ability to move as seen through the lens of the individual—Briscoe and Hall defined it as a boundaryless mindset—which is one's willingness to initiate and pursue work-related relationships across organizational boundaries (Segers et al., 2008).

To accomplish their research objective, Segers et al. used prior research of Briscoe and Hall (2006) that combined protean career orientation and boundaryless mindset into eight career profiles. The motives for the eight career profiles were assessed using the SHL Motivation Questionnaire. Additionally, to determine the individual attributes associated with protean career orientation and boundaryless mindset, these profiles were tested against individual demographics such as gender, age, managerial experience, level of education, culture (using Hofstede's cultural dimensions), and industry sectors. All prior research had shown the reliability and validity of the instruments Segers et al. (2008) used in their research. There were 13,655 individuals from different countries in Europe who participated.

The results of their study showed the emergence of four large career clusters: protean career architect, trapped/lost, hired gun/hired hand, and curious/wanderer. The labels are based upon the combination of high and low scores on the specific motivational factors (see Table 1).

Table 1. Protean and Boundaryless Career Clusters

	Personal Principles (Values-driven)	Achievement & Personal Growth (Self-Directed)	Autonomy & Affiliation (Psychological Mobility)	Interest (Psychological & Physical Mobility)	Progression & Material Reward (Physical Mobility)	Job Security (Self-directed and Physical Mobility)
Protean Career Architect	High	High	High	High	Medium	Low
Trapped/Lost	Low	Low	Low	Low	Low	Low
Hired gun/Hired hand	Low	High	Medium	Medium	Medium	Medium
Curious/wanderer	Low	Low	High	High	Medium	Medium

The descriptions of the clusters are as follows:

1. In the protean career architect cluster, individuals scored high on personal principles, achievement and personal growth, autonomy and affiliation, and interest. They had medium scores on progression and material reward and low scores on job security (Segers et al., 2008). Individuals in this cluster will have the following characteristics: career decisions driven by personal values; independent and in charge of their own careers; open to move across different jobs, organizations, industries, and countries; and willing to initiate work-related relationships across boundaries.

2. Curious/wanderer cluster, the study found that there are more people with fewer than 5 years of work experience compared to the average of 10 years of experience found in other clusters. Their hypothesis is that as this population enters the workforce, they probably go through a phase of trial and error, trying to learn about managing their careers. The individuals in this cluster can be described as low on the protean dimensions (low on values-driven and self-directed). They are higher on the boundaryless dimensions, physical mobility and psychological mobility—attracted to change and movement across boundaries, countries, and organizations as well as motivated by work variety.

3. Hired gun/hired hand cluster—this cluster contained more people between 3 and 10 years of work experience and on average below 40 years old. They are likely to be productive yet are not aware of their own personal values to be able to become real leaders. They are ambitious, productive, and focused on building their own careers; hence, are more open to align themselves with the

organizational values. They tend to be young managers, with 4 years or less of managerial experience—driven to manage their own careers yet unlikely to drive change. As an organization, the greatest potential in developing protean career architects is by helping hired guns/hired hands discover their own personal values early in their careers.

4. Trapped/lost cluster—this cluster had more people between 40 and 50 years old. The motivational factors linked with this cluster are avoiding failure and avoiding the loss of self-esteem. This cluster seemed to show up more in the construction, manufacturing, transport, and logistics industries. This can be problematic for organizations, as trapped/lost individuals are not likely to take risks and explore opportunities outside of themselves. The organization will need to provide opportunities to continually stretch individuals out of their comfort zones.

As a suggestion for future research, Segers et al. called for studies that link motives with behaviors. For example, even though protean career architect was one of the large clusters identified, it was not confirmed whether the individuals identified had the protean career track record in their careers. If someone is motivated by personal growth, how does this show up in their careers, what are the behaviors that are associated with an individual who is motivated by personal growth? This study will attempt to link beliefs about intelligence with career behaviors.

The Implicit Theory of Intelligence (Mindset)

The implicit theory of intelligence explains that there are two different ways individuals perceive their intelligence. Fixed refers to the belief that intelligence is fixed; it is carved in stone. Growth refers to the belief that intelligence is malleable (Dweck, 2006). The impact of these belief systems manifests in different ways. For a student with

a fixed mindset, receiving a bad grade on an exam might impact how they perceive their intelligence (i.e., "I am not smart"). Alternatively, a growth mindset student will approach the bad grade as an indicator that she must study harder.

This literature review examines the relationship between the implicit theory of intelligence and other implicit theory constructs within the world of work. In two studies, the implicit theory of intelligence was found to not be correlated with other work-related implicit theories such as job fit, job satisfaction, and passion for work. These two studies suggested that the implicit theory of intelligence is different than implicit theories of work. Alternatively, when evaluating career success, there are key findings to show that the implicit theory of intelligence is correlated to how individuals perceive their career success.

The implicit theory of intelligence is grounded in Kelly's (1955) theory of personality and Heider's (1958) field theory of social perception. Combined, they suggest that one's assumption about the self and social reality guides one's social perception and behaviors. Additional research in the implicit theory realm continues to study how human beliefs about the malleability or fixedness of human nature influence behaviors. As Burnette and Pollack described in their study, implicit theory has also been researched in : "leadership (e.g., Burnette, Pollack, & Hoyt, 2010; Tedesco, 1999), individual and group stereotyping (e.g., Levy, Stroessner, & Dweck, 1998; Rydell, Hugenberg, Ray, & Mackie, 2007), health (e.g., Burnette, 2010), entrepreneurship (e.g., Pollack, Burnette, & Hoyt, 2012), personnel performance evaluations (e.g., Heslin, Latham, & Van de Walle, 2005), and negotiation (e.g., Kray & Haselhuhn, 2007)" (Burnette & Pollack, 2013, p. 361).

In contrast, the relationship between implicit theory and careers has not been heavily researched. Two recent studies discussed the concept of implicit theory in the workplace. First, Burnett and Pollack (2013) explored the linkage between implicit theory and the concept of job fit and subsequently job/life satisfaction. This research suggested that there are two ways individuals differ in their beliefs about the meaning of work. Those beliefs are destiny belief and growth belief. Destiny belief is the belief that a career is either meant for someone or is not. Alternatively, growth belief is the belief that successful careers are cultivated and developed.

Even though the research by Burnette and Pollack referred to implicit theory as defined by Dweck et al. (1995), Burnette and Pollack's specific research was heavily influenced by implicit theories that predict relationship outcomes. In this context, destiny belief is defined by whether someone believes that romantic relations are or are not meant to be. Someone with growth beliefs believes that relationships benefit from putting effort into resolving challenges.

Burnette and Pollack (2013) tried to demonstrate the difference between the implicit theory of intelligence and the implicit theories of relationships. In the implicit theory of intelligence, if individuals believe that their ability is fixed, then they do not believe it can be changed. Alternatively, in the implicit theory of relationships, an individual can believe that a relationship is meant to be *and* that the relationship benefits from putting effort into resolving challenges.

Applied to careers, Burnette and Pollack suggested that an individual can believe that there are some careers that are meant to be or are well matched *and* that careers are developed by overcoming challenges and obstacles. In their view, Dweck's 2006 model is two ends of the same continuum—one construct (fixed versus growth); an individual

only believes that there are some careers that are well matched *or* that careers can be developed through overcoming challenges. The destiny and growth theories of work provide two independent constructs.

Burnette and Pollack (2013) designed two studies to test their hypotheses. Their first study was designed to develop an implicit theory of work scale and to explore the relationships of the different variables (i.e., destiny theory of work, growth theory of work). This study hypothesized that the destiny and growth theories of work provide two independent constructs. Additionally, the relationship between these two theories will be closer correlated to the implicit theory of relationship than to the implicit theory of intelligence.

Burnette and Pollack recruited 333 participants, working adults who had been at their current companies an average of five years. Participants were primarily from the United States. The participants were given four assessments: implicit theory of work, implicit theory of intelligence, implicit theories of relationship, and Big Five personality dimensions.

In this study, Burnette and Pollack (2013) found a negative correlation between the destiny belief and implicit theory of intelligence. The more someone believes that their career is meant to be, the less it correlates to their belief on intelligence. Additionally, they also found a moderate positive correlation between the growth belief and implicit theory of intelligence. Even though there is a moderate relationship, it was not clarified whether the relationship is stronger with entity theory (fixed) or incremental theory (growth). Does someone who believes that a career is developed by overcoming challenges also believe that intelligence is fixed? Or do they believe that intelligence is malleable? This study will attempt to show a relationship between implicit theory of

intelligence by suggesting the difference between individuals with fixed versus growth mindset, specifically their approach on employability.

As noted in the limitations of Burnette and Pollack's study, though the implicit theory of work was marginally correlated with other implicit theories in expected ways, the study did not provide evidence of predictive validity or causality. Further research needs to be conducted to examine whether the implicit theory of work relates to education, cognitive complexity, and the nature of the job (i.e., salary or prestige).

In their second study, Burnette and Pollack (2013) attempted to test their implicit theory of work scale using a confirmatory factor analysis to explore the relationship between the destiny theory of work with job fit, job satisfaction, and life satisfaction.

In implicit theories of relationship, differences between destiny and growth theories of relationship predict important relationship outcomes, specifically noting that partner fit is a strong predictor of relationship outcomes. In this context, partner fit is defined as how strongly people believe that their current relationship partner (i.e., spouse, boyfriend/girlfriend) is their ideal relationship partner. Using this theory in developing their implicit theory of work, Burnette and Pollack attempted to see the parallel using job fit as a predictor of career outcomes defined as job and life satisfaction. They theorized that the relationship between these variables will be stronger with individuals with a destiny theory of work.

Results from Burnette and Pollack's second study showed that the relationship between job fit, job satisfaction, and life satisfaction is influenced by the destiny theory. Someone who believes that his or her career is meant to be is more likely to identify himself or herself as having the right career and report positive job and life satisfaction scores. As with any correlational study, the relationship between destiny theory with job

fit, job satisfaction, and life satisfaction does not imply causality—believing one's career is meant to be does not cause someone to have positive job and life satisfaction.

Burnett and Pollack called for future research in the area of the implicit theories of work. Although the results of their study showed that implicit theories of work differ from implicit theory of intelligence, more research is needed to see if these theories hold when applied to a work context. Do people with destiny theory behave similarly to individuals with a fixed mindset in the workplace?

In a second recent study of the implicit theories of work, Chen, Ellsworth, and Schwarz (2015) studied the relationship between implicit theory and passion for work. They suggested two ways individuals differ in their beliefs about passion for work. One is fit theory, which is defined as the belief that passion for work is found through a fit with the right line of work, and the other is develop theory, which is the belief that passion for work is developed over time in a line of work.

In their study, Chen et al. outlined implicit theory frameworks in two ways: domain-general and domain-specific. In domain-general, Chen et al. highlighted the concept of entity and incremental theory in relation to morality as researched by Chiu, Dweck, Tong, and Fu (1997). That theory explains entity theory as the belief that people cannot change the kind of people they are. Alternatively, an incremental theorist belief is that people can change their dispositions (Chiu et al., 1997).

In a domain-specific framework, people can have an incremental theory about their music ability and an entity theory about their weight (Dweck et al., 1995). For example, people can believe that they can improve their ability to play an instrument (incremental theorist) and not believe that they can lose weight (entity theorist). Whether it is domain-specific or domain-general, there has been much research on implicit

theories in different areas of life (for example, motivation and leadership). However, as Burnette and Pollack (2013) highlighted in their study, Chen et al. (2015) also noted that there is limited research on implicit beliefs in the area of work and specifically on their study of passion for work.

In their study Chen et al. (2015) conducted four different experiments, one of which was to differentiate implicit theories about passion for work from other implicit theories. Their hypothesis was that people's implicit theories of passion for work would explain the diverse work-related outcomes beyond general implicit theories. They did not find any significant correlation between their passion for work theories and the general "kind of person" implicit theories. This suggests that the two variables they proposed operate in different constructs than the implicit theory of intelligence or morality (Chen et al., 2015).

Like Burnette and Pollack, Chen et al. concluded that individuals can have both fit and develop theories; the two factors are not mutually exclusive. Chen et al. found that fit and develop theories are different than implicit theories of morality (domain-general); how people perceive their careers does not significantly relate to how they perceive morality. Both studies share this similarity where the proposed implicit theories of work do not show any significant correlation to individuals' beliefs on morality or intelligence.

Another study linking the implicit theory of intelligence to the world of work is a study that relates implicit theory to career success. In 2003, Heslin measured the relationship between implicit theory and how individuals perceive career success. He noted that though there has been a lot of research on the antecedents of career success, the conceptualization and measurement of career success itself has not been adequately studied. He went on to explain that of the two criteria used to measure career success,

most studies have focused on the objective criteria (e.g., pay, promotion) of career success versus the subjective criteria of career success. He cited Hughes' 1958 definition: "The subjective criteria of career success are defined as how an individual reacts to his or her career" (e.g., job satisfaction, work life balance) (Heslin, 2003, p. 262).

Additionally, by drawing from Festinger's social comparison theory, Heslin (2003) explained that individuals react to their careers through their own lenses (self-referent criteria) and through the lenses of others (other-referent criteria). Despite studies that have shown how social comparison theory shows up in organizations, studies that show how career success is measured using other-referent criteria are limited. Based on this, Heslin explored the measure of career success using self-referent and other-referent criteria.

Heslin's study asked the question of whether people use self-referent criteria or other-referent criteria to evaluate their careers. If they use both, his study sought to answer whether people are equally likely to do so or whether there are individual differences that impact the selection of self-referent versus other-referent criteria. Heslin used the implicit theory of intelligence to seek understanding of individual differences that impact the perception of career success.

As noted by Dweck and Bempechat (1983), when fixed-mindset (entity theorists) students were asked when they feel smart, the responses included "when I turn in the papers first." Alternatively, growth-mindset (incremental theorists) students answered "when I am reading a hard book" (quoted in Heslin, 2003, p. 125). This research provided a foundation for Heslin to hypothesize that fixed-mindset (entity theorists) people are likely to adopt other-referent criteria when evaluating their career success.

Alternatively, growth-mindset (incremental) theorists are more likely to use self-referent criteria.

Unlike the findings presented by Burnette and Pollack (2013) and Chen et al. (2015), where their proposed implicit theories lie relatively independent from the implicit theories of intelligence and morality, Heslin's (2003) study found a strong correlation between how individuals perceive their intelligence and how they conceptualize their career success. Granted, Heslin used part-time MBA students versus the other two studies which used full-time employees. Additionally, all studies were not longitudinal and hence do not provide predictive validity or causality.

Based on the literature review of the implicit theory of intelligence and its influence in the world of work, this study explores the relationship between an individual's implicit theory of intelligence and an individual's beliefs about personal career choices. Do one's beliefs about intelligence impact how one makes career decisions?

The summary of literature findings for the implicit theory of intelligence is shown in Figure 2 below.

Self		Work		Outcome
• How one views oneself • Implicit person theory (Dweck, 2006)	→	• How one's view of oneself shows up in the world at work, specifically careers • Implict theory of work and job fit (Burnett & Pollack, 2013) • Implicit theories about achieving passion for work (Chen, Ellsworth, & Schwarz, 2015)	→	• How one views one's work experience (i.e., career success, job/life satisfaction) • Career success (Heslin, 2003) • Implicit theory of work and job fit (Burnett & Pollack, 2013)

Figure 2. Summary of Literature on Implicit Theory of Intelligence

The main findings of the implicit theory of work and job fit and the implicit theories about achieving passion for work show a limited correlation to the implicit theory of intelligence developed by Dweck et al. (1995). The main findings were that the implicit theory of work is a separate construct than the implicit theory of intelligence. One believes that intelligence is either fixed *or* not versus that individuals might find that their passion for work is from finding a job fit *and* from cultivating their craft over time.

In making decisions on careers, people tend to have to make a choice between one option or another and, in some cases, make tradeoffs. Do they move to a job internally even if the work is not as exciting, or do they try to look outside of their company for opportunities? These tradeoffs and decisions might have a stronger relationship to how individuals view themselves differing from the highlighted studies reviewed.

The intent of this study is to add to the career literature by providing insight on how beliefs on intelligence might impact decisions that people make in their careers.

Employability

Employability can be described as follows: individuals with a high employability orientation tend to have adaptive attributes, and this impacts their ability to navigate complex work environments. Individuals with higher degrees of employability will be able to identify opportunities within and between organizations; they are also likely to participate in competency development initiatives. Further research in this area also shows that individuals with high employability orientation are not only adaptive, they are also proactive (Fugate, Kinicki, & Ashworth, 2004).

This literature review covers the following:

1. The attributes that define employability orientation—mainly openness to change, adaptability, and proactivity.

2. The relationship between employability orientation and employability behaviors.

3. The role of competency development, perceived career success, and employability. Individuals who have an employability orientation are more likely to participate in competency development activities. Additionally, their perception of their own employability impacts their perception of career success. The more employable they are, the more likely they are to think they are successful.

In 2004, Fugate, Kinicki, and Ashforth published a study expanding the definition of employability and its role in influencing organizational behaviors. This study asserted that employability embodies proactive adaptability in the work domain. Not only are individuals actively engaging their work environment, they are also aware of what is going on so that they can proactively prepare for changes that might happen.

In agreement with prior studies that highlighted the importance of the individual characteristics in adaptation at work, the basic premise of the Fugate et al. study was to

review the dimensions of employability. It studied the relationship between the dimensions with employability independently and the relationship between the dimensions themselves. In their study, Fugate et al. looked at three dimensions of employability: career identity, personal adaptability, and social and human capital. The three dimensions are based on prior research on person-centric characteristics that show adaptability at work.

Fugate et al. proposed that the relationship between employability and its dimensions is an aggregate multidimensional construct. The synergistic combination of the employability dimensions (e.g., career identity, personal adaptability, social and human capital) create one's employability. For example, one's social capital (one's goodwill inherent in one's social network) impacts one's employability, not the other way around. In their study, Fugate et al. called for further research to test their theoretical propositions as well as for future studies to operationally define the construct of employability—for example, to define what high versus low employability means.

In 2008, Fugate and Kinicki answered their earlier calling for further research by developing and validating a dispositional measure of employability. Dispositional employability was defined as "a constellation of individual differences that predispose individuals to (pro)active adaptability specific to work and careers" (p. 503).

In this study, dispositional employability dimensions evolved from Fugate et al.'s earlier work in 2004. In 2008, the dimensions that were deemed critical and representative of the active and adaptable nature of dispositional employability were as follows: openness to changes at work, work and career resilience, work and career proactivity, career motivation, and work identity.

To develop and validate the dispositional measure of employability, three studies were conducted, one of which was a longitudinal study that measured the impact of dispositional employability with organizational change. All three of the independent studies supported the construct validity of the dispositional measure of employability. This allows researchers to empirically examine the relationship between dispositional employability and other variables.

As it is explored in this literature review, the concept of dispositional employability speaks to traits more so than actual behaviors that people do in being employable. In 2004, van Dam investigated the relationship between employability orientation and employability activities.

In her study, van Dam (2004) explained employability orientation as the attitudes of employees towards interventions aimed at increasing the organization's flexibility through developing and maintaining workers' employability for the organization. Different than the initial definition of employability that speaks to traits and that is person-centric, van Dam introduced a definition that is organization-centric. Despite that difference, van Dam believes that a relationship may still exist since employees who are interested in their own employability may also have a more positive attitude towards their organization's interventions.

Van Dam's conceptual model of employability orientation included five antecedent dimensions to employability such as openness, initiative, tenure, perceived organizational support, and career development support. She also introduced two mediating variables in her conceptual model: career anchors and organizational commitment. The result of the relationship between the antecedent dimensions and mediating variables to employability orientation is employability activities.

Employability activities speak to the actions employees undertake to improve and maintain their employability. She noted that prior research by Sutton in 1998 had shown links between attitudes and behaviors; therefore, it was her hypothesis that a positive relationship would exist between employability orientation and employability activities.

The test of van Dam's conceptual model of employability indeed showed a positive relationship between employability orientation and employability activities. For example, an employee who has a positive attitude towards learning and development activities tends to engage in these activities. Employability orientation was not the only predictor of employability activities; other antecedent and mediating variables had a positive relationship to employability activities such as career anchor (specifically variety), career development support, and affective commitment to the organization (emotional attachment an employee has developed towards the organization). It does seem logical that an individual who has variety as a career anchor, meaning he or she prefers a career that is varied and regularly brings new challenges, would have an affinity for employability activities.

The study by van Dam is one of the studies that links attitudes of employability to behaviors of employability. The lens of the attitudes in Van Dam's study is defined by how the employees respond to the organizational changes. There is a need to continue this research and focus on the individual lens and its relationship to one's employability behavior.

Another measure of employability and conceptual framework of employability was introduced by Van Der Heijde and Van Der Heijden (2006). Their conceptual framework of employability is competence-based. They stated that the market development changes in the last decades have pressured organizations to become more

flexible. In turn, the structure of work such as de-specialization and deregulation also changed. It transitioned from a job-based HR management system to a competence-based, person-related HR management system. Examples of this are total quality management and lean production—these new concepts decreased the specialization of labor and increased teamwork.

In their article, they align prior studies by Fugate et al. (2004) and van Dam (2004). Van Der Heijde and Van Der Heijden believe that the study by Fugate et al. (2004) focused on career outcomes and the study by van Dam (2004) focused on organizational outcomes. By focusing on competences at the individual level, Van Der Heijde and Van Der Heijden (2006) could align both individual career outcomes and organizational outcomes regarding employability within one conceptual framework. If an individual focuses on his or her competence by developing skills and knowledge that supports employability, that will increase the individual's employability. In turn, employable individuals drive positive organizational outcomes.

The dimensions for competence-based employability by Van Der Heijde and Van Der Heijden (2006) are as follows: occupational expertise, anticipation and optimization, personal flexibility, corporate sense, and balance. There were three findings that were significant from this study. First, anticipation and optimization as an employability dimension is a predictor for periods of unemployment. The higher the score is for anticipation and optimization, the fewer periods of unemployment employees suffer. Second, personal flexibility is only positively related to periods of unemployment. The higher one scores on personal flexibility, the more periods of unemployment he or she suffers. It does not seem that personal flexibility exercised out of one's job domain impacts one's unemployment positively. For example, an engineer who moved into a

finance role might experience longer periods of unemployment compared to another engineer who stayed in the field longer. Third, corporate sense is a great predictor of promotions, gross income, and subjective hierarchical success. Corporate sense has a positive impact on both subjective and objective career success criteria.

Further testing will be needed to determine the impact across diverse samples. This study also calls for a longitudinal study to examine causality between employability and career/organizational outcomes.

In 2011, De Vos, De Hauw, and Van der Heijden contributed to the career literature by integrating the concept of career success and employability. The study used two subjective career success indicators: perceived satisfaction and marketability. The result of the study supported the idea that employee participation in competency development initiatives as well as perceived support for competency development are positively associated with workers' perceptions of employability. Self-perceived employability appeared to be positively related to career satisfaction and perceived marketability.

The study by De Vos et al. also noted the lack of research examining the relationship between employability and career management. It suggested a more longitudinal approach to the study using a more diverse population. Additionally, since the career success and employability factor is self-reported, the authors called for additional research using measures to validate the self-report (i.e., manager input to the employee's employability). So far, the only study using both employee and supervisor input is the one by Van Der Heijde and Van Der Heijden (2006).

The findings of the literature on the topic of employability show some common themes on the traits of employability, specifically openness to change and adaptability.

Little research has been done to link employability traits to employability behaviors as well as the impact of employability behaviors on individual career outcomes or organizational outcomes. When employees are assertive in developing themselves, do they drive higher productivity for the employer?

Longitudinal studies are consistently highlighted as the requested future research to determine the causal relationship of employability to individuals or organizations. The one longitudinal study by Fugate and Kinicki (2008) does show promise that employees with high dispositional employability report more positive emotions related to the organization changes over time.

Summary

In the case of the implicit theory of intelligence and the concept of employability, the literature review found limited studies exploring these two variables and their application in the world of work. Even though some studies in employability utilized some of the concepts from the implicit theory of intelligence, none incorporated it as part of the conceptual model of employability.

In the literature review of implicit person theory, two studies found a negative to moderate correlation between their own implicit person theories of work to the implicit person theory of intelligence. One study found a positive correlation between the implicit person theory of intelligence and how people view and evaluate their career success. This study did not attempt to create an implicit person theory of work; instead, it drew from the implicit person theory of intelligence in exploring the relationship with employability behaviors. This study was influenced by the protean career theory where the individual is in charge of the career choice. Therefore, the implicit theory of intelligence and morality

is a preferred construct. In the domain-specific of careers, individuals see themselves as either in charge or not.

In the literature review of employability, most studies focused on the traits of employability and exploring the relationship to either individual outcomes or organizational outcomes. It was the intent of this study to look at employability behaviors and use the implicit person theory/mindset as a replacement for the commonly studied employability traits (e.g., competence-based conceptual model, dispositional employability model).

Longitudinal studies are limited in both the study of implicit person theory and employability. It was not the intent of this study to close this gap. However, this study did attempt to look at patterns of career outcomes for individuals to propose a connection between mindset, employability behavior, and career outcomes.

In all studies noted in the literature review, participants came from United States, Canada, and Netherlands. A visual model summarizing the studies found in this literature review is shown in Figure 3.

Belief re: Self	Belief about the self • Implicit theories and their role in judgements and reactions: A world from two perspectives (Dweck, Chiu, & Hong, 1995)

Belief re: Self + Work	Belief that connects self to the world of careers • The protean career: A quarter-century journey (Hall, 2004) • The interplay of boundaryless and protean careers: Combinations and implications (Briscoe & Hall, 2006) • Protean and boundaryless careers: A study on potential motivators (Segers, Inceoglu, Vloeberghs, Bartram, & Henderickx, 2008) • Implicit theories about achieving passion for work (Chen, Ellsworth, & Schwarz, 2015) • Implicit theory of work and job fit (Burnette & Pollack, 2013) • Employability: A psycho-social construct, its dimensions and applications (Fugate, Kinicki, & Ashforth, 2004) • Antecedents and consequences of employability orientation (van Dam, 2004) • A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organizational change (Fugate & Kinicki, 2008)

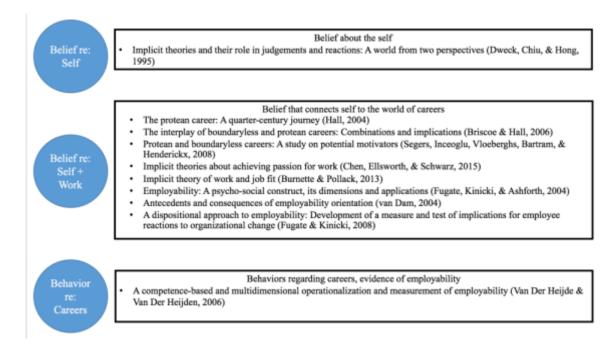| Behavior re: Careers	Behaviors regarding careers, evidence of employability • A competence-based and multidimensional operationalization and measurement of employability (Van Der Heijde & Van Der Heijden, 2006)

Figure 3. Literature Review Summary

Considering the findings of the literature review, there is an opening to do further research linking implicit theory of intelligence to the world of work through understanding its relationship with employability. Methodology and measurement tools used in this study will be described in the next chapter.

Chapter 3: Methodology

This study focused on the relationship between the implicit theory of intelligence and employability. The objective of this study is to explore the relationship between one's belief on intelligence and employability behaviors—that is, does one's belief about intelligence impact one's employability?

This chapter presents the research design and describes the participants. It includes a detailed description of the measurement tools and methodology as well as the research administration and data analysis procedure.

Research Design

This was an action research study. It was designed to plan and study change through data gathering and analysis of evidence as well as through the reflection of the researcher on the role played in the process of change (Riel, 2013).

This study used a mixed-method research methodology. Mixed methods involve combining or integrating qualitative and quantitative research and data (Creswell, 2014). A quantitative method was used to assess the implicit theory of intelligence. To provide further context for the result and explore its relationship to the world of work and careers, a qualitative method of semi-structured interviews was used. Using both quantitative and qualitative methods allows for a better understanding of the research problem and its intervention.

Participants

An effort was made to enlist participants who were currently employed at a semiconductor capital equipment company in San Jose, California. Participants were limited to US-based employees to minimize the impact of cultural values on mindset and careers. Other eligibility criteria included a total career experience of equal or greater

than 10 years. Individuals with 10-plus years of career experience would be able to provide historical context on their career choices as data points for employability. They also would be able to provide information on what they want from their careers in the future.

Participants were limited to the engineering population; this decision was based on limiting the participants to individuals in a similar career domain. Despite the variety of engineering roles, such as mechanical design, software, or applications engineer, the similarities between these roles are higher compared to individuals in a different career domain such as sales, marketing, finance, or HR.

A total of 375 eligible participants were invited to complete the implicit theory of intelligence survey (self-theory scale). Seventy-five participants took the survey; six results were discarded because the participants did not complete the survey fully or did not provide consent. Sixty-nine participants completed the survey. The mindset score results are shown in Table 2.

Table 2. Distribution of Mindset

Mindset	%, n
Growth	68.12% ($n = 47$)
Fixed	24.61% ($n = 17$)
Borderline	7.25% ($n = 5$)

Eighty-three percent of the participants had years of experience of more than 15 years. Sixty-eight percent of the participants identified themselves as currently working in an individual contributor role, with 32% identifying as working in a managerial role. Ten percent of the participants were female, and 90% of the participants were male.

Thirty-three percent of the participants had a doctorate degree, 35% had a master's-level degree, 26% had a bachelor's-level degree, and 6% either did not provide their educational information or did not have any higher education.

Through random selection, 20 participants were selected out of the group that completed the implicit theory of intelligence survey (self-theory scale). Ten participants were identified as individuals with a fixed mindset score, and 10 individuals were identified as individuals with a growth mindset score. The participants were selected to participate in a 60-minute semi-structured interview, conducted by the researcher. The mindset score was not provided to the participants, and the same questions were asked to all the participants. Interviews were conducted in person by the researcher. Three out of the 20 interviews were done virtually as the participants were not located in the headquarters office. The breakdown of demographics of the interview participants is shown in Table 3.

Table 3. Demographics of Participants Based on Mindset

	Growth Mindset	**Fixed Mindset**
N	10	10
Average Years of Service	17.54	16.34
Male to Female Ratio	9:1	8:2
Education	Bachelor's degree: 3 Master's degree: 5 Ph.D.: 2	Bachelor's degree: 3 Master's degree: 4 Ph.D.: 2 Not identified: 1

Measurement

A quantitative method was used to assess the implicit theory of intelligence. To provide further context for the result and explore its relationship to the world of work and careers, a qualitative method of semi-structured interviews was used. The specific instruments and their administration are detailed in the following sections.

Implicit theory of intelligence (self-theory scale). The self-theory scale is a revised version of the implicit theory of intelligence developed by Dweck and colleagues in 1999. The scale consists of eight items, same as the original, each reworded from the original so that each statement reflected a first-person claim about the extent to which intelligence was fixed or malleable. As with Dweck's implicit theory of intelligence scale, this self-theory scale showed good internal consistency, $\alpha = .90$. (De Castella & Byrne, 2015). The list of questions is included in Appendix A.

Respondents selected their agreement to each of the eight items using a scale of 1 to 6 (strongly agree to strongly disagree). To score the questionnaire, only three questions were scored and averaged:

1. I don't think I personally can do much to increase my intelligence.
2. My intelligence is something about me that I personally can't change very much.
3. I can learn new things, but I don't have the ability to change my basic intelligence.

An average score of 3 or less indicated an entity theorist (fixed mindset) and a score of 4 or more indicated an incremental theorist (growth mindset). Individuals who scored between 3 and 4 were determined to not have a clear implicit theory of intelligence and were excluded from the study. This methodology has been validated by prior research by Dweck et al. (1995).

Semi-structured interview. The interview process was designed to obtain information on the role that growth or fixed mindset plays in one's career journey. The interview started with questions designed to understand an individual's career history and followed with questions designed to understand an individual's viewpoint of the future.

To assess individuals' patterns and themes in their careers, this study used questions included in the career history analysis of the revised career anchors participant workbook (Schein & Van Maanen, 2013). The career history analysis by Schein and Van Maanen was designed to ask probing questions on an individual's education and job—starting from his or her first job to the last. It concludes by asking review questions, such as the following, which were used in the interviews in this study:

1. "As you look back on your career so far, do you see any major turning points?" (p. 15).

2. "What were they and why did they occur?" (p. 15).

3. "What are some critical values that guide your choice of jobs and organizations?" (p. 15).

4. "Do you see any pattern in your career?" (p. 15).

According to Schein and Van Maanen (2013), past decisions and the reasons for those decisions are a basis for self-insight. For example, people might say that they value learning yet the pattern of their career histories might show that they value stability and have shied away from taking on new opportunities. Understanding one's career history will also reveal one's application of mindset in one's career. Did someone change jobs due to the thirst for learning and change? Or were they forced to look for a job because they were impacted by a reduction in force?

In a study of employability explored in the literature review, a compound instrument consisting of five dimensions of employability was developed and refined (Van Der Heijde & Van Der Heijden, 2006). Out of the five dimensions, anticipation and optimization was the one significant predictor for periods of unemployment. Based on this, the researcher used the three questions from the anticipation and optimization dimension and revised it to open-ended interview questions:

1. In formulating your career goals, do you take into account the external market demand?

2. What do you do to improve the knowledge and skills that will benefit your career?

3. Are you aware of the latest development in your career domain?

   The full list of Van Der Heijde and Van Der Heijden questions is included in Appendix B.

   The last set of interview questions looked to evaluate an individual's future orientation towards his or her career. This utilized Schein and Van Maanen's (2013) career history analysis. The proposed questions are as follow:

1. As you look ahead in your career, what are the things you are especially looking forward to?

2. Why are you looking forward to these things?

3. What do you want your ultimate job to be?

4. What do you think will actually happen in the next 10 years of your career?

   This set of questions looked to evaluate the application of mindset in planning one's career journey. Would someone with a fixed mindset look at the future differently than someone with a growth mindset?

The interview was used to gain qualitative data to assess the individual's career history, employability, and application of mindset to one's orientation to work. The interview was scheduled for 60 minutes and consisted of 11 questions (Appendix C). A summary of the measurement methods is shown in Table 4.

Table 4. Summary of Variables and Measurement Tools

Variable/Concept	Definition	Measurement Tool
• Implicit person theory of intelligence (Belief)	• "Two different assumptions people may make about the malleability of personal attributes" • "They may believe that a highly valued personal attribute, such as intelligence or morality, is a fixed, nonmalleable trait-like entity (entity theory), or • They may believe that the attribute is a malleable quality that can be changed and developed "(incremental theory) • (Dweck, Chiu, & Hong, 1995, p.267)	• Implicit person theory of intelligence (self-theory scale) • By De Castella & Byrne, 2015 • Survey, administered by Qualtrics • 8 questions

• Employability (Behavior)	• A constellation of individual differences that predispose individuals to (pro)active adaptability specific to work and careers" (Fugate & Kinicki, 2008)	• Semi-structured interview
		   • Van Der Heijde & Van Der Heijden, 2006
		   • Schein & Van Maanen, 2013)
		 • 11 questions

Administration. Initial contact was made via email to the eligible population in the semiconductor capital equipment company. The email included the purpose of the research, an explanation on why the population was chosen to be the sample, a brief review of the methodology, and the study's code of conduct (i.e., confidentiality). Once there was interest and consent from eligible participants, the participants received the self-theory scale.

Upon the completion of the self-theory scale, a random sampling of participants occurred. The objective was to select 20 participants to participate in the face-to-face 60-minute interview with the researcher.

Participants were invited to meet with the researcher one-on-one. Prior to the meeting, the participants were asked to review their resumes or internal career histories.

Data Analysis Procedure

Implicit theory of intelligence was measured using methodology developed by Dweck et al. (1995). Interview data were transcribed verbatim and qualitative data were analyzed. Key themes were analyzed for each question and then analyzed based on the interview segments: career history, employability orientation, and future career outlook. Results were divided based on the participant's score on the implicit theory of intelligence (growth versus fixed mindset). Key themes for each group were validated by two other researchers.

Summary

In summary, this study was an action research study that used mixed-method methodology to determine the relationship between mindset and employability behaviors. Measurement tools such as the implicit theory of intelligence (self-theory scale) have been previously tested to ensure reliability and validity. Semi-structured interview questions were designed to obtain information regarding the individuals' application of mindset in their careers, career histories, and employability behaviors. Chapter 4 describes the results of the study.

Chapter 4: Results

This study focused its research on the individual aspect of career. It concentrated on an individual's belief regarding intelligence as the variable that influences how individuals approach choices in their careers; specifically, it looked for a relationship between implicit theory of intelligence and employability.

The study was organized in two consecutive sections; first is the administration of the implicit theory of intelligence, followed by the semi-structured interviews. The results of the interviews were categorized into the following sections: career history analysis, employability orientation, and future career orientation.

Career History

The career history analysis by Schein and Van Maanen (2013) is designed to ask probing questions on an individual's education and jobs—starting from his or her first job to the last.

In reviewing the interview data, some themes emerged from the two different mindsets as shown in Table 5.

Table 5. Themes—Career History Based on Mindset

Theme	Fixed Mindset (%, *n*)	Growth Mindset (%, *n*)
Importance of technology	50% (5)	50% (5)
Influenced by other people	50% (5)	N/A
Influenced by newness	N/A	40% (4)
Organizational view	N/A	40% (4)
Personal influence creating career turning point	N/A	30% (3)

Five respondents from each mindset relayed the importance of technology. Considering the industry that the organization operates in as well as the population who are mostly experienced engineers, it is not surprising that technology is a theme in both fixed and growth mindset respondents. Both groups noted working with technology that is technically challenging (i.e., designing software for robotics, artificial intelligence) as an important variable in their careers.

For individuals with a fixed mindset, as they looked back on their careers, they noted external influences, specifically other people as a factor in their career histories. For example, a respondent explained her reason for staying in a role: "the reason I'm here is that I really like the people I work with." Another respondent noted other people as an influencing factor: "so when I, for instance, chose a job, the people [were] very, very important. And the fact that I liked the people."

In one case, a respondent noted that he selected programs to work on based on the challenge of the technology; in further dialogue, it was revealed that when other people who are in the similar technical field see what he is doing, they will be impressed, "I like people to go, damn, that's incredible. I didn't know that could be done, that really drives me."

For three respondents, other people, specifically direct managers, have influenced the decision in changing jobs and/or companies. One respondent explained that she moved to different companies because her boss recruited her: "Since I had worked with them, I knew I could work with them, which is also a reassuring thing." Another respondent explained that she was surprised when her manager approached her to become a manager; it was not planned and despite feeling unprepared for the role, she decided to do it.

In growth mindset individuals, as they reviewed their career histories, newness as a factor showed up in four out of the 10 participants. Newness in this context is defined as not the same. The respondents noted "learning something new" or "taken on a new challenge" as a factor in their careers. For example, comments included: "I thought it was a great opportunity to learn new things," "I do like to go tackle new things and get a fresh look at the world," "The work is interesting—I like that it's new all the time," and "a choice to do things in a different way and looking at things differently, which has its own challenges, but that's what I thrive on."

In one case a respondent noted that working on something that other people do not know how to do is a factor, like another respondent in the fixed mindset category. In this case, however, with further dialogue, the respondent provided an intrinsic value as a factor: ". . . won't just settle and kind of be a custodian . . . the one thing that I've always had in mind, from the beginning of my career is when I'm leaving that organization, I want to leave it better than when I got there. I want to do something that, changes the organization, gives it a new capability."

Four respondents with growth mindsets also expressed an organizational view as a theme. In the interview, growth mindset respondents shared their perspective on the organization. For example, respondents evaluate the company's position in the labor market, its ethics, and whether it is well run as criteria for selecting their employment. Additionally, two respondents noted the impact of their individual skill set to the organizational success as part of their career drive. For example, "my drive always has been to kind of try to contribute more toward what the company does." Alternatively, in the fixed mindset responses, the selection of employer was dependent upon the

technological challenge or the specific job needed—a broader organizational view was not a theme in the fixed mindset interviews.

In growth mindset respondents, three people noted events where they created the turning points in their careers. Two respondents changed their working conditions to meet their families' needs, one by working from home and one by working part time for a period. Both communicated their need to the organization through their managers and were accommodated. The third respondent spoke up and influenced a decision at a critical project review meeting, and it became a turning point as it informed the respondent that having a core skill is not enough, one also needs to use it to create a larger impact. The respondent used this philosophy as a guiding principle in his career going forward.

In summary, both mindsets have shared similarities in their career histories, specifically the importance of technology in their careers. In growth mindset respondents, the influence of newness, an organizational view, and likelihood to drive their own career turning points stands out as a difference.

Employability Orientation

As noted by Van Der Heijde and Van Der Heijden (2006), anticipation and optimization is one of the significant predictors for periods of unemployment.

In reviewing the interview data, some themes emerged from the two different mindsets as shown in Table 6.

Table 6. Themes—Employability Orientation—External Market Awareness Based on Mindset

Theme	Fixed (%, *n*)	Growth (%, *n*)
External Market Awareness	80% (8)	90% (9)

➢ Impact to current job	30% (3)	40% (4)
➢ Impact to future (retirement)	10% (1)	N/A
➢ Impact to organization	N/A	30% (3)
➢ Impact to future (employability)	40% (4)	20% (2)

Both mindset interviewees were aware of the external labor market in the formulation of their career goals. How the information gets used is where some divergence occurs. In fixed mindsets, 80% of respondents were aware of the external market demand and utilized the information to impact what they were currently doing in their roles, as information to plan for their future—in all cases this relates to retirement or to ensure employability. Some examples included

- "I mean that's the reason I chose the MBA. At least with the MBA. I have a differentiation [compared to other engineers]".

- "That's certainly one of the reasons for getting more into the program management side of things, is that it's more obviously transferable."

- "Guess I was thinking at the time that moving into an official software role would made me more marketable."

- "In retirement, I want to create an app so I do view what the external market looks like."

In growth mindset interviews, 90% of respondents were aware of the external market environment and used the information slightly differently. Three respondents utilized the external market information to think about the broader perspective such as organization and/or industry. They think about how the external market information will make an impact in these areas. For example,

- "This is the best platform for me to add value to the company and then into the industry. I've got to take an industry view of things. I want to add value to the industry."

- "The external market is something that I'm taking more interest in focusing on, where the semiconductor industry is going, where we as a company are going."

As for the impact of external awareness on their current jobs, respondents with a growth mindset noted that they use the external market awareness to evaluate their current jobs. For example, if they find an external market job to be interesting, they will evaluate whether that job is in alignment with their personal values and/or their personal goals: Where is the job located? What impact does it have on the organization? What impact might it have on their families?

When it comes to optimization, specifically individual behaviors that improve knowledge and skills to benefit their careers, Table 7 shows the activities that were noted along with the frequency with which they were mentioned.

Table 7. Themes—Employability Orientation—Activities to Increase Knowledge and Skills Based on Mindset

Theme	Fixed (%, frequency)	Growth (%, frequency)
Other people	23% (3)	25% (5)
Reading	15% (2)	25% (5)
Training/Classes	23% (3)	20% (4)
Higher Education	8% (1)	10% (2)
Internet resources	23% (3)	5% (1)
Nothing	8% (1)	N/A

Trade Conferences	N/A	10% (2)
Failure	N/A	5% (1)

Both mindsets have similar activities that they pursue to improve the knowledge and skills that will benefit their careers. Respondents with a growth mindset gave greater consideration to pursuing higher education compared to respondents with a fixed mindset. During the interview, it was revealed that the pursuit of higher education is to broaden the skill set in pursuit of impacting the organization at a higher level. For example, an engineer is considering an MBA program to broaden his skill set and so he can consider becoming a general manager and running an engineering department or moving into marketing and providing influence to the customer or to the engineering product in the pre-design phase.

Alternatively, the respondents with fixed mindsets mentioned higher education as a path only once. In this case, the MBA was a competitive advantage compared to other engineers in the role— "Because I could be competitive in that field [business] where I would never be able to be competitive in electrical engineering." This relates to the concept Heslin discussed earlier, other-referent criteria – individuals react to their careers through the lens of others.

There was only one respondent in the fixed mindset group who did not believe in improving knowledge and skills to benefit career and noted "You're born to be what you are. You cannot be better, no matter what. You have whatever brain, you have whatever muscles, you have whatever capability. Now, if you're not pushing your limits to use it, then you'll be just worse. You cannot be better, but to be worse is yeah." In this person's

perspective, improving knowledge and skills will only keep a person in his/her career, not necessarily make it better.

Alternatively, one respondent with a growth mindset described failure as motivation to improve knowledge and skills and benefit his career—"you learn from making stupid mistakes."

The last question that addressed the anticipation and optimization component of employability orientation focused on whether respondents were aware of the latest developments in their respective career domain (Table 8). In this context, that generally referred to the engineering domain within the semiconductor industry.

Table 8. Themes—Employability Orientation—Anticipation and Optimization Based on Mindset

Theme	Fixed (%, *n*)	Growth (%, *n*)
Aware	20% (2)	80% (8)
Not aware	40% (4)	20% (2)
Somewhat aware	40% (4)	

In the fixed mindset group, three out of the four respondents who were not aware of the latest developments in their career domain acknowledged that they probably should be more aware. For the most part, the knowledge will put individuals in areas that stretch their comfort zone, and there is a need to stay within the comfort zone. For example, an engineer expressed that knowing how the organization's customer uses the products is important yet he also does not care to know. He wants to focus on the technically complex engineering problems. The tension between understanding the need to be aware

yet being content in the current state leaves the respondent to take no action in keeping updated with the latest developments in the career domain.

The two individuals who are aware of the latest developments of their career domain do so by attending conferences and by building strong relationships with the suppliers. One respondent conveyed that the career domain changes very quickly, hence one needs to be aware constantly. Alternatively, several respondents who are not aware of the latest developments articulated that the career domains they are in change slowly.

For respondents who are somewhat aware, the answers had similar justifications. In this category, respondents expressed the vastness of their career domain and noted that even though they are aware of some developments, their career domain is so vast that one person cannot be fully aware of everything that is occurring.

In the growth mindset group, respondents were generally more aware of the latest developments in their career domain. They become so by reading publications within their specific career domains and by talking to other people, specifically peers from other divisions who are working on a different product set but in a similar role, friends who are working in other organizations in a similar role, and thought leaders within the industry. Some acknowledged that the current industry does not change at a fast pace compared to others, and some viewed their career domains as changing faster than the industry. In general, 80% of the respondents in the growth mindset group are actively thinking and participating in understanding the future developments of their career domain.

In employability orientation, anticipation and optimization is articulated as a way for employees to create their own future in the world at work, where individuals are proactively preparing for changes at work to strive for the best possible career outcome. Based on the interviews conducted, growth mindset respondents have shown more

inclination towards anticipation and optimization as a variable of employability

orientation. Whether this behavior is something that is intentional or just the product of

their mindset is unknown.

Both sets of respondents are active in learning and developing themselves. The

difference lies beneath the action itself, in the motivation. What emerged from this study

was that respondents with a growth mindset tend to view development and learning in a

broader context and balance it with their own individual lens (i.e., how they define

achievement, family situation, what they find satisfactory). Additionally, even though

they use other individuals to learn and develop, they do not necessarily use other

individuals to determine their career path. Lastly, the attraction to newness is still a

variable in individuals with a growth mindset, specifically in their view of the external

market.

Future Career Orientation

This portion of the interview sought to evaluate the application of mindset in

planning one's career journey. Would someone with a fixed mindset look at the future

differently than someone with a growth mindset? Based on the findings from the

interview, the answer is yes. Some of the themes that emerged are shown in Table 9.

Table 9. Themes—Future Career Orientation Based on Mindset

Theme	Fixed (%, *n*)	Growth (%, *n*)
Stop working	60% (6)	30% (3)
➢ Retirement	30% (3)	30% (3)
➢ Life outside of work	30% (3)	N/A
Satisfied and open	40% (4)	N/A

Specific goals	N/A	90% (9)
➢ New job/promotion*	N/A	10% (1)
➢ Building capability/skill set*	N/A	40% (4)
➢ New experience	N/A	20% (2)
➢ Personal Satisfaction*	N/A	20% (2)
Stays the same	N/A	10% (1)

*Indicates areas where individuals also want to retire (1 person per category)

In the fixed mindset group, respondents had two main themes that emerged in their view of the future: stop working and satisfied with their current role yet open for opportunities if they present themselves. In ceasing to work, respondents are either looking forward to a life of retirement where they will stop working for a living or looking to decrease their time spent at work until they retire fully. In retirement, respondents are looking to do things that they are personally interested in without being beholden by the organization. In some cases, the personal interests are still in the areas of technology. For respondents who are looking to retirement as a future goal, the need to keep things the same goes hand in hand. For example, a respondent stated, "I'm hoping to stay basically right where I am until I do retire."

Similarly, three respondents verbalized their desire to increase the time spent outside of work, whether it is to pursue hobbies or to spend more time with family. The respondents explained at this point in their careers, they wanted to focus more on what satisfies them personally versus "climbing the corporate ladder."

Forty percent of respondents in the fixed mindset category stated that they are satisfied in their roles and are open to opportunities if they present themselves. For example, "I'm fairly happy in the role I'm in. I'm not necessarily looking to make a huge

jump, although you know if a certain opportunity came on, I might be open to wanting to try it." Another respondent explained that even though he does not think being a manager is something that is aligned with his skillset, he would still like to try and see how it goes if his manager offered a management role to him.

One respondent, though satisfied in his/her current role, did have a specific ultimate job in mind for the future—a specific leadership position. Given this ultimate job, the respondent also expressed his desire to stay within the current scope and stay challenged by working on more complex technology; that ultimate job will either be handed to him as a reward for working with complex technical issues or will remain a dream.

Like fixed mindset respondents, growth mindset respondents also expressed a desire to retire in the future. Additionally, the three respondents who were looking forward to retirement were actively working on specific goals prior to retirement. For example, a respondent explained that, ultimately, she would like to retire and contribute in the community as a teacher or social worker; in the meantime, she is focused on growing her team and expanding her own capability to make a positive impact to the organization. Another respondent said that he is looking forward the most to retirement, and in the meantime, he measures success on whether he has more skills as the years progress.

The rest of the growth mindset respondents with specific goals (60%) tended to focus on goals such as

- Building capabilities and skill set. One respondent noted the need to understand how business decisions are made that are impacting the product that the organization decides to fund or not.

- New experience. One respondent expressed an interest in working in another country. Another expressed the interest in understanding a new technological frontier.

- Personal satisfaction. A respondent articulated the desire to see his/her current division achieve success. The division has been challenged by a variety of factors and has not been recognized by the organization as a profitable, successful division. The respondent would like to continue to contribute and make this happen.

Lastly, one growth mindset respondent expected things to stay the same in the future. The respondent would like to continue doing the same role; he/she derives personal satisfaction and enjoyment from the role and does not foresee changes.

The application of mindset to one's career journey is where the difference between the two mindsets emerged. In the fixed mindset, the themes are relatively similar across the 10 respondents. In the growth mindset, a variety of themes emerge.

Chapter 5: Discussion

This study delves into the relationship between the implicit theory of intelligence and employability. The objective of this study is to discover the relationship between one's belief on intelligence and employability behaviors—that is, does one's belief about intelligence impact one's employability?

This chapter reviews the study conclusions and interpretations, recommendations, limitations, and directions for future research. This chapter concludes with a summary of learnings.

Conclusions and Interpretations

There are several interpretations and conclusions from the data. First, individuals with a growth mindset emphasize newness as a variable in their career decisions, look at their careers in the broader context of organizational impact, and are more likely to view their careers using their own lens. Alternatively, individuals with a fixed mindset are more likely to be influenced by other people in making career decisions. Additionally, the difference in mindsets does impact employability orientation. These conclusions are discussed in detail in the following sections.

Conclusion 1: Growth mindset and its focus on newness in their career decisions. In evaluating the career history analysis, individuals with a growth mindset focused on newness in making their career decisions. This result suggested that participants were intentionally exploring something different than what they were currently doing, that there is a motivation of learning or doing something new as a driver in making career decisions.

The findings of this study are aligned with Dweck's (2000) conclusions detailed in her book, *Self-Theories: Their Role in Motivation, Personality, and Development*,

which state that based on a study done on students, those with a growth mindset prefer the tasks that will allow them to meet a challenge and learn new things.

This research added to the literature by showing some connection between growth mindset and learning in the world of work. Additionally, the theme of newness that showed up in the growth mindset individuals is aligned with Hall's definition of a protean careerist, which is an individual who is a continual learner, "always open to new possibilities" (Hall, 2004, p. 6). Whether there is a strong correlation between a protean careerist and growth mindset as defined by Dweck is something to be further explored.

Conclusion 2: Growth mindset and its view of organizations. In evaluating individuals with a growth mindset and their career journeys, the perspective of looking at organizations in a broader context was a consistent theme. In evaluating career history, individuals with a growth mindset look at organizations as a whole, the company's position in the labor market, its ethics, and whether it is well run as criteria for selecting their employment. Additionally, individuals with a growth mindset also looked at how well their skill set matched the overall organization—whether they will be able to contribute to the whole.

As for employability orientation, individuals with a growth mindset utilize information to see the impact to the organization as a system. They evaluate whether consumer behaviors will impact the industry and, if so, how it will impact the organization and how they will need to change their own job scope or influence the business differently. Also, in terms of future career orientation, individuals with a growth mindset are more likely to include organizational success and impact as part of their goals. These results suggested that individuals with a growth mindset view things more broadly than those with a fixed mindset, specifically when it comes to their careers.

During the literature review on employability orientation, the concept of organization showed up three times:

1. In explaining how individuals with employability orientation might be more open to their organization's intervention (Van Dam, 2004).

2. Individuals who are employable drive positive organizational outcome (Van Der Heijde & Van Der Heijden, 2006).

3. The Van Der Heijde & Van Der Heijden (2006) study also introduced corporate sense as one of the dimensions of employability. Corporate sense in this case is explained as an employee's organizational identity—the integration of the individual's identity with the organization, ability to participate as an integrated part of a team versus as an individual, taking responsibility for collective decision making, and identifying with the corporate goals.

The conclusions that emerged from this study differ from the three concepts of organizations outlined. In this study, the theme of organization might suggest that having an organizational perspective is another attribute of an individual with a growth mindset. Not only are individuals with a growth mindset keener to experiment and try new things, they also have a broader view of the organization.

How this attribute can impact an organization is something that will need to be researched further. Similarly, whether the attribute is related to other capabilities such as leadership or whether this attribute is correlated to the protean careerist profile will need further exploration.

Additionally, this study also shows that individuals with both mindsets are open to the organization's intervention, especially individuals with a fixed mindset. This population relies on others in the organization to intervene in their careers, albeit there

might be hesitancy in going out of the comfort zone. Alternatively, fixed mindset individuals do not exhibit employability orientation as compared to the growth mindset individuals; hence, this study expands Van Dam's (2004) research by suggesting that openness to organizational intervention might not suggest employability.

Conclusion 3: Growth mindset and self-referent criteria. In this study, growth mindset individuals showed indicators of using self-referent criteria in evaluating their careers. In reviewing the career history, the concept of newness was a common theme amongst growth mindset individuals that emerged when individuals reflected on their career histories. It is a concept that was driven by the individual lens, what the person considers new, what he/she wants to learn. In addition, growth mindset individuals reviewed their current career choices against their personal values or life situations (i.e. family). In the career history analysis, two growth mindset individuals noted that they had adjusted their job requirements based on their current life demands.

In evaluating employability orientation, individuals with a growth mindset are more likely to balance the external market data with their own personal needs. In the event a more attractive job presents itself, they will evaluate it against their own needs. In pursuing development activities such as higher education, growth mindset individuals will evaluate it against their own future goals. In the future career orientation interview, growth mindset individuals described a variety of career goals that interest them, showing the individual perspective on planning for the future.

Heslin's (2003) study found a strong correlation between how individuals perceive their intelligence and how they conceptualize their career success, where growth mindset individuals tend to use self-referent criteria to evaluate their career success. This study aligns with Heslin's findings.

Additionally, in the Career Orientation Index developed by Briscoe and Hall (Hall, 2004), the instrument found two main factors for a protean career orientation; one of them is called values-driven. This means that individuals will make career decisions driven by personal values. As some of the interviews with growth mindset individuals showed, this study found a relationship between a growth mindset and protean career orientation.

This relationship between a growth mindset and perceiving one's career through one's own lens means that what is perceived as career growth can be as unique as the individual. As a manager, and for the organization, it is important to provide flexible and varied career options.

Conclusion 4: Fixed mindset and other-referent criteria. In contrast to individuals with a growth mindset, individuals with a fixed mindset were influenced by other-referent criteria, specifically other people. In reviewing career histories, individuals with a fixed mindset often described how other people, such as managers, influenced their decisions on taking new roles or in changing employers. Individuals with a fixed mindset also expressed the attractiveness of a role or organization based on whether they liked the people they interviewed with. Liking the people that they work with is also stated as a variable that fixed mindset individuals value; it determines their satisfaction in their current role. Also, recognition by other people is an important variable for individuals with a fixed mindset.

This conclusion was only slightly supported in studying employability orientation. Only one respondent stated that the main driver for him/her to develop was to be more competitive than his/her peer group. However, this theme was further supported in looking at future career orientation. In this segment, individuals with a fixed mindset

expressed satisfaction with their current role and openness for new opportunity if it presents itself. In some cases, this refers to managers providing promotional opportunities or providing information on a new project where the individual can contribute.

This study found that individuals with a fixed mindset place a greater reliance on other people compared to individuals with a growth mindset. Heslin's (2003) study found a strong correlation between how individuals perceive their intelligence and how they conceptualize their career success. In Heslin's study, the other-referent criteria refer to how individuals compare their work-related successes to other people. As an example, individuals might ask themselves: Is my career moving faster than my peers? Am I recognized more compared to others in my role? This study did not include career success as a variable; the other-referent criterion in relation to the employability concept is defined by one's reliance on other people in influencing one's career choice.

This relationship between fixed mindset and perceiving one's career through another's lens means that the role of managers and peers in one's career growth is important. As an organization, this raises the importance of managers and peers in creating an environment where people can thrive and grow their careers.

Conclusion 5: The relationship between mindset and employability behaviors. In both mindsets, employability-oriented behaviors exist. In employability orientation, anticipation and optimization is articulated as a way for employees to create their own future in the world at work, where individuals are proactively preparing for changes at work to strive for the best possible career outcomes. Based on the interviews conducted, growth mindset respondents showed more inclination towards anticipation and optimization as a variable of employability orientation compared to fixed mindset respondents.

This conclusion is driven by how participants used information to relate to their careers. Growth mindset respondents tended to perceive and evaluate information received, whether on the external labor market or on their career domain, and use it to build a larger picture. Even though both mindsets have made career decisions to ensure employability, the emergence of factors that influence this behavior is distinctly different between the two mindsets, impacting how individuals proactively approach their careers. In growth mindset individuals, their desire to explore something new allows them to actively look for new experiences, explore opportunities, and determine which opportunity to commit based on what they value in their lives and careers.

In planning their future, growth mindset individuals explore a variety of career goals, showing similar themes as mentioned previously: broadening skill set to impact the organization in a more influential way and trying something new. The average years of service and experience in both mindsets were quite similar, yet, in the growth mindset group, the desire to stop working was a lot less.

This study showed that individuals with a growth mindset tend to explore new areas and new challenges and are willing to go beyond their comfort zone to do so. This distinction is why this study concluded that growth mindset individuals have a slightly higher inclination towards anticipation and optimization as an employability orientation.

To answer the research question on whether one's beliefs about intelligence impact one's employability, this conclusion is yes. The findings suggest there is a relationship between one's beliefs on intelligence and its impact on how one approaches one's career. Whether this makes growth mindset individuals more employable is an area open for further research.

For an organization perspective, it is not about how one mindset is better than the other, since both exhibit employability orientation. It is whether the organization understands the distinction between the two mindsets and provides flexible interventions to grow both growth and fixed mindset individuals.

Recommendations

Three recommendations are highlighted, specifically to enable those who guide employee career development (i.e., managers, leaders, and HR professionals).

A culture of learning. The first recommendation is to ensure that the organizational culture promotes and allows for risk-taking behavior to help individuals develop their capabilities. The findings of this study suggest that growth mindset individuals are more prone to explore tasks, roles, and opportunities that will allow them to try new things and learn new things. In reflecting on their careers as well as in planning for the future, embracing something new was noted as a common variable. Additionally, growth mindset individuals are more prone to view failure as a learning tool.

This study was conducted in an organization that is operating in a relatively mature industry. Still, individuals have found newness to be a factor that attracted them in their roles and divisions. Leaders, managers, and HR professionals could proactively match growth mindset individuals with tasks, opportunities, and experiences that are new.

A leader who promotes learning can provide growth mindset individuals with leadership opportunities in leading a task force to explore new markets. In this specific organization, mobility between individuals from an engineering division to a different division should be encouraged and promoted. Having conversations in staff meetings

about lessons learned from a recent failure or having product roadmap meetings are also ways to promote learning in work environments.

The social network within the organization. The second recommendation is to strengthen the social network within the organization to provide career development support to employees. This study found that fixed mindset individuals are influenced by other people in making their career choices. Growth mindset individuals, though not as influenced by others, also use other people as a mechanism to learn and enhance their understanding of the changes within their career domain.

These findings mean that a social network of an employee is important. Social network is defined as an employee's connection to others within the organization. Managers, specifically as individuals who have the closest relationships with employees, will have the most impact on career development. This study also found that peers are important.

Several examples could be given to support employability behaviors through a social network. First, an intervention could include a speaking engagement where senior leaders discuss their own career journeys. These speaking engagements can ignite ideas as well as provide networking opportunities to others in the organization who might have similar interests. Second, robust internal systems could provide information on each individual employee's talents, experience, and aspirations. All employees could access and review the information; managers could find relevant internal candidates for opportunities, and employees could connect with each other.

Flexibility in career options and choices. The third recommendation is to provide flexibility in work arrangements and career choices. This study found that individuals value the flexibility they have received, especially when there are conflicting

demands from their personal lives. In growth mindset individuals, their choices in careers are evaluated against their own personal views—this means what is important to one person might not be as important to another. Providing flexible career options to develop one's employability is important.

Several measures could be taken to support this recommendation. First, providing part-time opportunities for individuals who need to care for their families will help individuals continue building their capabilities and balance their family needs. Second, telecommuting options could be provided for individuals who want to live outside the Silicon Valley, with its high cost of living. Third, resources and support could be provided to individuals who want to rotate to a new role temporarily to learn the different aspects of the business.

Study Limitations

There were several limitations in this study. First, the sample size was small and specific to an engineering population with 10 plus years of working experience. The results cannot be applied to all individuals. Second, there is subjectivity in the researcher's interpretations even though there were two other individuals who reviewed the coded themes of the interview data. Third, this research was conducted in one company; hence, care would need to be taken to assume this applies to all other companies.

Suggestions for Additional Research

In light of the conclusions, additional research in the following areas could be done to further explore the connection between one's beliefs on intelligence and employability:

1. *Explore the attribute of "organizational view" and its association with one's beliefs on intelligence.* This study found that growth mindset individuals have an organizational perspective. It is a different aspect than was found from prior literature reviews, and this researcher would like to see an expansion of this study's finding. If growth mindset individuals see things in a broader context, does this translate to other capabilities such as leadership or strategic agility?

2. *Apply a longitudinal study where participants are interviewed and careers are followed throughout to determine whether or not the conclusions found in this study still stand.* This study was done at a single point in time where participants were asked to reflect on their careers, discuss their current employability behaviors, and think about their future career orientation. At this point is where it is recommended that further research be conducted to determine whether the future bears different results than what was planned. In 10 years' time, will individuals with a growth mindset apply their capabilities in achieving their career plans, and is it different than fixed mindset?

3. *Develop a revised career orientation index that shows predictive validity or correlation between growth mindset and a protean careerist.* This study did not specifically try to connect the protean careerist with a growth mindset. The study did show that there are similar attributes between individuals with a growth mindset and a protean careerist, specifically the focus on learning. Is having a growth mindset the key attribute to being a protean careerist?

Summary of Learning

The world of work today is volatile, uncertain, complex, and ambiguous (Bennett & Lemoine, 2014); and this calls for individuals to be active participants in designing

their careers. The author hopes that this study will provide awareness to individuals so they can use themselves as instruments in their careers.

This study looked for a relationship between one's beliefs on intelligence and employability. The study found that individuals with a growth mindset emphasize newness as a variable in their career decisions, look at their careers in the broader context of organizational impact, and are more likely to view their careers using their own lens. Alternatively, individuals with a fixed mindset are more likely to be influenced by other people in making career decisions. Also, the difference in mindsets does impact employability orientation.

It follows that the recommendations for individuals who enable career development in organizations (i.e., leaders, managers, and HR professionals) are to promote a culture of learning, strengthen the social network in an organization, and provide flexible career experiences to employees. While further study is advised to confirm and extend the conclusions presented, these recommendations might foster a work environment that promotes employability behaviors.

References

References

Bennett, N., & Lemoine, J. (2014). *What VUCA really means for you*. Retrieved from https://hbr.org/2014/01/what-vuca-really-means-for-you

Bolles, R. N. (1972). *What color is your parachute?* Berkeley, CA: Ten Speed Press.

Briscoe, J. P., & Hall, D. T. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior, 69*, 4-18.

Burnette, J. L., & Pollack, J. M. (2013). Implicit theories of work and job fit: Implications for job and life satisfaction. *Basic and Applied Social Psychology, 35*(4), 360-372.

CEB Corporate Leadership Council. (2015, October 6). *The new path forward; Creating compelling careers for employees and organizations*. Palo Alto, CA: Corporate Executive Leadership.

Chen, P., Ellsworth, P. C., & Schwarz, N. (2015). Finding a fit or developing it: Implicit theories about achieving passion for work. *Personality and Social Psychology Bulletin, 41*(10), 1411-1424.

Chiu, C.-y., Dweck, C. S., Tong, J. Y.-y., & Fu, J. H.-y. (1997). Implicit theories and conceptions of morality. *Journal of Personality and Social Psychology, 73*(5), 923-940.

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). Thousand Oaks, CA: Sage.

De Castella, K., & Byrne, D. (2015). *My intelligence may be more malleable than yours: The revised implicit theories of intelligence (self-theory) scale is a better predictor of achievement, motivation and student disengagement*. (Unpublished manuscript). Retrieved from https://openresearch-repository.anu.edu.au/bitstream/1885/13127/2/De%20Castella%20and%20Byrne%20My%20Intelligence%20May%20Be%20More%20Malleable%202015.pdf

De Vos, A., De Hauw, S., & Van der Heijden, B. I. (2011). Competency development and career success: The mediating role of employability. *Journal of Vocational Behavior, 79*(2), 438-447.

Dweck, C. (2000). *Self-theories: Their role in motivation, personality, and development*. Philadelphia, PA: Psychology Press.

Dweck, C. (2006). *Mindset: The new psychology of success*. New York, NY: Random House.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*, 256-273.

Dweck, C. S., Chiu, C.-y., & Hong, Y.-y. (1995). Implicit theories and their role in judgements and reactions: A world from two perspectives. *Psychological Inquiry, 6*(4), 267-285.

Fugate, M., & Kinicki, A. J. (2008). A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organizational change. *Journal of Occupational and Organizational Psychology, 81*(3), 503-527.

Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior, 65*, 14-38.

Hall, D. T. (1976). *Careers in organizations.* Glenview, IL: Scott Foresman.

Hall, D. T. (2004). The protean career: A quarter-century journey. *Journal of Vocational Behavior, 65*, 1-13.

Heider, F. (1958). *The psychology of interpersonal relations*. New York, NY: Wiley.

Heslin, P. A. (2003, August). Self- and other-referent criteria of career success. *Journal of Career Assessment, 11*(3), 262-286.

Hughes, E. (1958). *Men and their work.* Glencoe, IL: Free Press.

Jobs, S. (2005). Commencement speech, Stanford University, Palo Alto, CA. Retrieved February 22, 2016, from http://www.businessinsider.com/the-full-text-of-steve-jobs-stanford-commencement-speech-2011-10.

Kelly, G. (1955). *The psychology of personal constructs.* New York, NY: Norton.

Mintz, R. B. (2003). *The scripts we live by: How individuation, proteanism and narrative disruption relate to personal transformation and renewal*. (Unpublished doctoral dissertation). Fielding Graduate Institute.

Reich, C. (1970). *The greening of America*. New York, NY: Random House.

Riel, M. (2013, September 12). T1—Overview of action research (web training). Retrieved from https://www.youtube.com/watch?v=chJSM-cCScA

Schein, E. H., & Van Maanen, J. (2013). *Career anchors: The changing nature of work and careers. The participant workbook* (4th ed.). San Francisco, CA: Wiley.

Segers, J., Inceoglu, I., Vloeberghs, D., Bartram, D., & Henderickx, E. (2008, May). Protean and boundaryless careers: A study on potential motivators. *Journal of Vocational Behavior, 73*, 212-230.

van Dam, K. (2004). Antecedents and consequences of employability orientation. *European Journal of Work and Organizational Psychology, 13*(1), 29-51.

Van Der Heijde, C. M., & Van Der Heijden, B. I. (2006, Fall). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management, 45*(3), 449-476.

Appendix A: Implicit Person Theory of Intelligence (Self-Theory Scale)

Appendix A: Implicit Person Theory of Intelligence (Self-Theory Scale)

Stem: The following questions are exploring students' beliefs about their personal ability to change their intelligence level. There are no right or wrong answers. We are just interested in your views. Using the scale below, please indicate the extent to which you agree or disagree with the following statements.

Entity Self Beliefs Subscale (α = .90)

1. I don't think I personally can do much to increase my intelligence.

2. My intelligence is something about me that I personally can't change very much.

3. To be honest, I don't think I can really change how intelligent I am.

4. I can learn new things, but I don't have the ability to change my basic intelligence.

Incremental Self Beliefs Subscale (α = .92)

1. With enough time and effort I think I could significantly improve my intelligence level.

2. I believe I can always substantially improve on my intelligence.

3. Regardless of my current intelligence level, I think I have the capacity to change it quite a bit.

4. I believe I have the ability to change my basic intelligence level considerably over time.

Note. From *My Intelligence May Be More Malleable Than Yours: The Revised Implicit Theories of Intelligence (Self-Theory) Scale is a Better Predictor of Achievement, Motivation and Student Disengagement* (p. 36) by K. De Castella and D. Byrne, 2015 (Unpublished manuscript). Retrieved from https://openresearch-repository.anu.edu.au/bitstream/1885/13127/2/De%20Castella%20and%20Byrne%20My%20Intelligence%20May%20Be%20More%20Malleable%202015.pdf. Reprinted with permission.

Appendix B: Anticipation and Optimization Questionnaire

Appendix B: Anticipation and Optimization Questionnaire

1. How much time do you spend improving the knowledge and skills that will be of benefit to your work?

2. I take responsibility for maintaining my labor market value.

3. I approach the development of correcting my weaknesses in a systematic manner.

4. I am focused on continuously developing myself.

5. I consciously devote attention to applying my newly acquired knowledge and skills.

6. In formulating my career goals, I take account of external market demand.

7. During the past year, I was actively engaged in investigating adjacent job areas to see where success could be achieved.

8. During the past year, I associated myself with the latest developments in my job domain.

Note. Added italics designate subject areas chosen for the interview in this study.

Note. From "A Competence-Based and Multidimensional Operationalization and Measurement of Employability," by C. M. Van Der Heijde and B. I. Van Der Heijden, 2006, Fall, *Human Resource Management, 45*(3), p. 475. Copyright 2006 by Wiley Periodicals, Inc. Reprinted with permission of author.

Appendix C: Interview Script

Appendix C: Interview Script

1. As you look back on your career so far, do you see any major turning points?

2. What were they and why did they occur?

3. What are some critical values that guide your choice of jobs and organizations?

4. Do you see any pattern in your career?

5. In formulating your career goals, do you take into account the external market demand?

6. What do you do to improve the knowledge and skills that will benefit your career?

7. Are you aware of the latest developments in your career domain?

8. As you look ahead in your career, what are the things you are especially looking forward to?

9. Why are you looking forward to these things?

10. What do you want your ultimate job to be?

11. What do you think will actually happen in the next 10 years of your career?