

THE PERCEIVED IMPORTANCE OF VUCA-DRIVEN SKILLS FOR 21st CENTURY
LEADER SUCCESS AND THE EXTENT OF INTEGRATION OF THOSE SKILLS INTO
LEADERSHIP DEVELOPMENT PROGRAMS

by

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DEDICATION

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ABSTRACT

The 21st Century Leader must thrive in an environment of unprecedented volatility, uncertainty, complexity and ambiguity (VUCA). In order for leaders to be effective, new skills are necessary. This study measured to what extent business leaders perceive 10 new leadership skills identified as Maker Instinct, Clarity, Dilemma Flipping, Immersive Learning Ability, Bio-Empathy, Constructive Depolarizing, Quiet Transparency, Rapid Prototyping, Smart-Mob Organizing, and Commons Creating as important. The study measured perceived importance relative to addressing (a) strategic priorities, and (b) immediate pressing problems, and measured the extent the 10 new leadership skills are integrated into leadership development programs. Results verify all skills are perceived important at some level, and seven types of VUCA challenges and business priorities emerged as driving the overall perceived importance of the skills. Clarity and Dilemma Flipping respectively are perceived as most important for addressing both strategic priorities and immediate pressing problems. The order of importance for the remaining skills differs based on the context of (a) addressing strategic priorities and (b) addressing immediate pressing problems. Descriptive analysis revealed differences between industries and organization size; however, inferential statistical results revealed no significant difference between industry demographics or organization size and perceived importance of each skill. All 10 leadership skills are currently integrated into leadership development programs; however, the extent to which each skill is integrated differs by skill, and less than 20% of the respondents indicate any one skill is fully integrated. Results confirm the current extent of integration compared to the expected integration in the future varies by skill, with the majority of responses revealing the same or more integration in the future.

Key Words: VUCA, volatility, uncertainty, complexity, ambiguity, leadership skills, leadership development, survey research, Kruskal-Wallis

CHAPTER 1

INTRODUCTION

We live in a VUCA world, a constantly changing environment characterized by volatility, uncertainty, complexity and ambiguity. VUCA became a recognized acronym in the late 1990s with its origin in the U.S. military. First developed at the Army War College in Carlisle, Pennsylvania, VUCA terminology was used as a mantra to prepare for the unknown (Stiehm, 2002). VUCA became commonly used in the late 1990s to frame the existing and future leadership landscape for organizations of every size and in every market and is now considered a contextual framework for the 21st century (Johansen, 2007; Stiehm, 2002). Johansen (2007) describes the VUCA world in terms of both dangers and opportunities. The VUCA dangers, volatility, uncertainty, complexity and ambiguity (Johansen, 2007; Stiehm, 2002), refer to security, economic, market, and workforce conditions across our global environment. Leaders plan, make decisions, and move strategies forward on a daily basis; VUCA dangers represent the context in which leaders and their organizations view current conditions and anticipate operating in their future state. Johansen (2007, 2009, 2012) purports leaders must reframe VUCA dangers into opportunities of vision, understanding, clarity and agility to be positive change agents in the midst of constant chaos.

Regardless of industry and function, phenomena of globalization, technology, and rapid change demand that leaders are educated and ready to effectively navigate situations in the VUCA world (AchieveGlobal 2011; Adams, 2011; “Capitalizing on complexity,” 2010; CCL, 2011; Davies, Fidler, & Gorbis, 2011; Halamka, 2011; Johansen, 2007; Johansen, 2009; “Organisational Agility,” 2009; Prewitt, Weil, & McClure, 2011). For corporate executives, productivity, efficiency, and bottom line results are linked to effective leadership. Organizations

of the future require leaders who adapt quicker and in shorter time frames than ever before (Hesselbein & Goldsmith, 2009; Kavanaugh & Strecker, 2012; “Organisational Agility,” 2009; Prahalad & Hamel, 1994; Prahalad & Ramaswamy, 2004; Prewitt et al., 2011). As the 21st century continues to be wrought with volatility, uncertainty, complexity and ambiguity, new models of leadership and respective leadership skills will most likely emerge, with the VUCA leader at the helm. Johansen (2009) stresses the importance of leaders’ personal capacity to effectively cope and lead within the VUCA world.

Statement of the Problem

VUCA defines the new context of leadership, and VUCA conditions change at a rapid pace. To be successful in the 21st century, leaders need to be prepared to lead within this constantly changing VUCA context. Leaders have always had to consider critical questions that will guide strategic plans, resource allocation, and organizational development needs. Now they must do so within the VUCA context. Are today’s workers prepared to make sound decisions as tomorrow’s leaders (Johansen, 2007, Prahalad & Ramaswamy, 1994; Shafer & Zalewski, 2011)? Will organizations across industries and geographies experience the talent shortage now found only in specific industries and territories (Manpower Group, 2011)? Are today’s executives recruiting based on outdated competencies and skills (Prastacos, Soderquist, Papalexandris & Ioannou, 2010)? Are leadership development programs preparing our leaders for future achievement (Horney, Pasmore, & O’Shea, 2010, Prewitt et al., 2011)? Although there is consensus that attracting and retaining top talent is important in today’s business climate, current learning & talent development (L&TD) strategies may fall short of preparing leaders for future success (Johansen, 2009; “Organisational Agility,” 2009).

The extent that advanced leadership competency is important for future success is rapidly increasing, and developing new skills beyond basic agility, resilience, and learning, to meet new VUCA challenges is imperative (Johansen, 2011; Kouzes & Posner, 2007). For example, by 2020, there will be 10% fewer senior leader positions available than in 2010, yet the total workforce is expected to grow at least 5% (“United States Labor Report,” 2010). Emerging leaders face increased competition as technology and globalization continue to drive an expanded talent pool (Hesselbein & Goldsmith, 2009; “Organisational Agility,” 2009), and VUCA dangers continue to progressively change (Capelli, 2008; Kavanaugh & Strecker, 2012; Johansen, 2007, 2009). In a world where leaders must rapidly advance their skills, it is critical to focus on future work skills, the “proficiencies and abilities required across different jobs and work settings” (Davies et al., 2011, p. 1) needed to deal effectively with current and emerging drivers of change. The Institute for the Future for the University of Phoenix Research Institute outlines six drivers of change and describes these drivers as “disruptive shifts that are likely to reshape the future landscape” (Davies, et al., p. 3). These drivers include

- Extreme longevity—increasing global lifespans;
- Rise of smart machines and systems—heightened integrated automation;
- Computational world—massive increases in sensors and processing power;
- New media ecology—development of a new vernacular for communication;
- Superstructured organizations—creating extreme scale structures by tapping social connection resources previously unattainable;
- Globally connected world—greater integration across geographic borders.

Current skills-based competency models and skills emphasized in traditional leadership development programs today fall short in sufficiently addressing these drivers as most focus on

basic skills needed to function at minimal required performance levels (Carnevale, Gainer, Meltzer, & Holland, 1988; Leslie, 2009). In a study conducted by IBM (“Capitalizing on complexity,” 2010), results show that many chief executive officers distrust their own capability to cope with rapidly escalating complexity.

Increasingly interconnected economies, enterprises, societies and governments have given rise to vast new opportunities. But a surprising number of CEOs told us they feel ill-prepared for today’s more complex environment. Increased connectivity has also created strong—and too often unknown—interdependencies. For this reason, the ultimate consequence of any decision has often been poorly understood... With few exceptions, CEOs expect continued disruption in one form or another. The new economic environment, they agree, is substantially more volatile, much more uncertain, increasingly complex and structurally different. (p. 14)

The future of America’s business leaders depends on a heightened aptitude for dealing with volatility, uncertainty, complexity, and ambiguity (Johansen, 2007; Leslie 2009; Shaffer & Zalewski, 2011). With increased globalization, core competencies alone will eventually be insufficient causing a chasm in the job market – those people who are competent for the future, and those people who are not. Preparing to lead in the VUCA World is critical for any current or aspiring leader. New skills required to lead effectively in the VUCA World, as defined by Johansen (2009):

1. Maker instinct – ability to exploit inner drive to build and grow things, as well as connect with others in the making

2. Clarity – ability to make sense of clutter, to see through messes and contradictions to a future that others cannot yet see
3. Dilemma Flipping – ability to turn dilemmas into advantages and opportunities
4. Immersive learning – ability to learn from unfamiliar environments in a first-person way
5. Bio-empathy – ability to see things from nature’s point of view; to understand, respect and learn from nature’s patterns
6. Constructive depolarizing – ability to calm tense situations where communication has broken down, and bring people from divergent cultures toward constructive engagement
7. Quiet transparency – ability to be open and authentic about what matters to you without advertising yourself
8. Rapid prototyping – ability to create quick early versions of innovations with the expectation that later success will require early failures
9. Smart mob organizing – ability to create, engage with, and nurture purposeful change networks through intelligent use of current media
10. Commons creating – ability to seed, nurture and grow shared assets that benefit others and heightens competition

While Johansen deems these skills as critical for leaders functioning in the VUCA world, little research has been done to determine the extent leaders view these skills as important in their work environment. Also not known is the extent these skills are integrated into leadership development programs. Leadership development programs are defined as activities designed to promote, develop or support competencies and skills identified to help leaders of an organization

meet its goals. Specific leadership development programs addressed in this study include onboarding, executive coaching, career planning, self-directed learning and succession planning. These programs were selected because they represent the highest ranked programs identified in the 2011 International Learning & Talent Development Comparison Survey (Chartered Institute of Personnel & Development [CIPD] & Society for Human Resource Management [SHRM], 2011) and are recognized by workplace learning and development practitioners as the most commonly implemented leadership development programs (American Society for Training & Development [ASTD], 2012).

Purpose

The purpose of this study was to measure to what extent business leaders perceive the 10 new leadership skills as important. Specifically, the study measured perceived importance relative to addressing (a) strategic priorities, and (b) immediate pressing problems. Secondly, this study measured the extent the 10 new leadership skills are integrated into leadership development programs.

Research Questions

The following research questions guided this study:

1. To what extent is each skill perceived as important relative to (a) addressing strategic priorities and (b) addressing immediate pressing problems?
2. Which skills are perceived as most important?
3. Is there a significant difference between industry demographics and perceived importance of each skill? .
4. Is there a significant difference between organization size and perceived importance of each skill?

5. What specific challenges and business priorities drive the perceived importance of the skills?
6. To what extent are the most important skills integrated into leadership development programs?
7. Does the current extent of integration differ from the expected integration in the future?

Methodology and Research Population

This study sought to validate the perceived importance of the 10 new leadership skills and measure the extent business leaders in a Midwest urban city are incorporating the skills into leadership development programs. A survey design using comparative and correlational data was used to collect information related to how executives view the 10 new leadership skills. An electronic survey was sent to 4179 member companies of the Greater Des Moines Partnership. The survey population included small businesses, large corporations, educational institutions, and a wide range of organizations representing a variety of industries within the profit and non-profit sectors. Expected response rate was 6%. This response rate was based on historical responses of the Greater Des Moines Partnership Workforce Survey. Actual cleaned data response rate was 2.1%. Survey recipients were instructed to have a senior executive complete the survey. Descriptive data, including responder's gender, age, title category, industry, and organization size were collected. Specific definitions of the 10 new leadership skills were provided to aid in the collection and syntheses of useful data. The survey was created in Qualtrics survey software and sent via link directly from the Greater Des Moines Partnership.

This study assumed all 10 leadership skills are important on some level and that strategic priorities and work conditions dictate which skills are most important. The research revealed

perceived importance of each skill individually and which skills were perceived as most important.

Significance of the Study

Research indicates a new set of leadership skills that emphasize agility, flexibility and fast response time will be essential in the future (Center for Creative Leadership [CCL], 2011; Johansen, 2009, 2012; Sullivan, 2012). One of the three most common areas of new focus for leadership development includes improving skills of leaders to act in a more strategic and future-focused way (CIPD & SHRM, 2011). This study was important because it validated the perceived importance of the 10 new leadership skills as described by Johansen (2009, 2012) and provides workplace learning and development professionals with information about current integration of new skills into leadership development programs and perceived level of importance for the future.

Preparing for disruptive changes and staying on the cutting edge requires leaders to navigate effectively through VUCA dangers, turning them into opportunities (Halamka, 2011; Johansen, 2009; Sullivan, 2012). Although the 10 new leadership skills were developed using research and forecasting methods, and were tested for utility on several Institute for the Future (IFTF) clients (Johansen, 2012), leadership development efforts rely heavily on correctly identifying what needs improvement as perceived by top leaders in a specific organization (Bass, 1990). This study adds to the existing body of literature by revealing how business leaders in a Midwest urban city, an audience not represented in previous existing literature that references VUCA, perceive the importance of the skills. It also reveals the extent to which the skills perceived as most important are being incorporated into leadership development programs, providing quantifiable evidence of how leaders translate perceived importance into practical

action. In 2010, Johansen stated “The ten necessary leadership skills for success require intense future study and an ability to engage radical change” (p. 20). Confirming his support of this study, Johansen acknowledged the importance of testing the perceptions of business leaders and claimed his interest in seeing the results of this study (personal communication, February 22, 2013).

Definition of Terms

VUCA – acronym used to describe the conditions of volatility, uncertainty, complexity and ambiguity

V - Volatility – Nature and dynamics of change, specifically the pace of change and the drivers of change; Shaffer & Zalewski (2011) describe volatility as the “dynamic quality of the context for decision making” stating “continuously updated reports and data transform the definition of the situation in the mind of the decision maker (p. 66).

U - Uncertainty – Unpredictable and unreliable conditions; “Uncertain refers to the measured or perceived likelihood that projections or predictions will be realized” (Shaffer & Zalewski, 2011, p. 66).

C - Complexity – Multi-faceted conditions and confounding of issues; Shaffer & Zalewski (2011) point out “that causal factors or social forces at work in the situation are often competing with one another” and “decision makers must often weigh the competing influences and make informed guesses about which forces will ultimately sway the outcome of critical events (p. 66).

A - Ambiguity – Conditions that lead to multiple interpretations of circumstances; “Ambiguous refers to the unknown significance of one or more factors in a situation” (Shaffer & Zalewski, 2011, p. 66)

VUCA World – Conceptual framework and context for the 21st century; refers to the combination of existing VUCA conditions and potential opportunities; Johansen (2007) states “The VUCA world is all about change, including both dangerous ruptures and positive innovation. Inspiring strategies are hidden in the volatilities, uncertainties, complexities, and ambiguities (p. 46).

10 Leadership Skills – Defined by Johansen (2009), the skills needed to be successful in a VUCA world:

1. Maker instinct – ability to exploit inner drive to build and grow things, as well as connect with others in the making
2. Clarity – ability to make sense of clutter, to see through messes and contradictions to a future that others cannot yet see
3. Dilemma Flipping – ability to turn dilemmas into advantages and opportunities
4. Immersive learning – ability to learn from unfamiliar environments in a first-person way
5. Bio-empathy – ability to see things from nature’s point of view; to understand, respect and learn from nature’s patterns
6. Constructive depolarizing – ability to calm tense situations where communication has broken down, and bring people from divergent cultures toward constructive engagement
7. Quiet transparency – ability to be open and authentic about what matters to you without advertising yourself
8. Rapid prototyping – ability to create quick early versions of innovations with the expectation that later success will require early failures

9. Smart mob organizing – ability to create, engage with, and nurture purposeful change networks through intelligent use of current media
10. Commons creating – ability to seed, nurture and grow shared assets that benefit others and heightens competition

Performance / Performing – Beyond, specific behaviors, performance entails continuous and competent acts of carrying out job tasks and responsibilities.

Leader – For purposes of this study, leaders are people who have formal leadership and managerial responsibility; people identified as managers, strategists, high-potential front-line supervisors, executives or any other formal leadership position within a company. This study did not look at individual contributors, informal leaders or project team leaders. Leader refers to people with direct report responsibilities within a formal company structure.

Leadership Development Plan – A formal plan of action designed to assist leaders in the development of skills needed to successfully perform in the VUCA World.

Leadership Development Programs – Activities designed to promote, develop or support competencies and skills identified to help leaders of an organization meet its goals (ASTD, 2012); Leadership development programs addressed in this study include those identified in the 2011 International Learning & Talent Development Comparison Survey (CIPD & SHRM, 2011) including onboarding, executive coaching, career planning, leadership training, and succession planning.

Competency / Competencies – A specific ability or set of abilities needed to sufficiently function or perform within a job context. The results of a competency can be observed and judged. Different than knowledge and skills, competencies refer to contiguous demonstrable actions that lead to ongoing successful results. Gilbert (2007) states “Competent people are those who can

create valuable results without using excessively costly behavior” (p. 17). For purposes of this study, competencies are a set of skills. The 10 leadership skills studied are all part of a core competency referred to as “the ability to successfully lead in a VUCA world (Johansen, 2009).

Core Competencies – Competencies, also known as essential workplace skills, that are required regardless of job function, specific position or job level. A list of core competencies is provided in Appendix A. The ability to successfully lead in a VUCA world is not currently considered a core competency.

Technical Competencies – Competencies that relate specifically to a person’s area of expertise or job function. Examples of technical competency categories include engineering competencies, nursing competencies, teacher competencies and sales competencies. Leadership competencies are a form of technical competencies. A list of example leadership competencies is provided in Appendix B. The ability to successfully lead in a VUCA world is not currently considered a technical competency.

Competency Model – A framework or organized set of defined competencies and skills that are used to guide and assess individual performance. Competency models can be linked to hiring, assessment, training, and other human resources processes. This study shows a link between the VUCA competency model and workplace learning and development, specifically leadership development programs.

Industry demographics – This study reveals information about four industry categories, both public and private sectors. A list of industries provided by the Greater Des Moines Partnership was used to collect, sort and categorize information. The list of industries is attached as Appendix C.

C-level executive – Refers to the highest level executives within a company. Example titles include Chief Executive Officer (CEO), Chief Operating Officer (COO), Chief Compliance Officer (COO), Chief Technology Officer, President and Executive Director.

Organization size – This study's survey defined organization size using an existing 2012 workforce Survey (Greater Des Moines Partnership, 2012).

1. 5000 + employees
2. 1000 – 4999 employees
3. 500 – 999 employees
4. 250 – 499 employees
5. 100 – 249 employees
6. 50 – 99 employees
7. 10 – 49 employees
8. < 10 employees

During analyses, organization size was grouped into three categories:

1. < 50 employees
2. 50-499 employees
3. 500 + employees

Leadership level – This study defined leadership levels as:

1. C-level executive (example titles: CEO, CFO, COO, CTO, CLO)
2. Senior executive (example titles: SVP, VP, AVP, President)
3. Director-level (example titles: Director, General Manager, Executive Director)
4. Mid-manager (example titles: Manager)
5. Front-line manager (example titles: Manager, Supervisor)

Assumptions

The assumptions underlying this study included the following:

1. The VUCA World components of volatility, uncertainty, complexity and ambiguity provide the context for today's current global environment.
2. All 10 leadership skills as defined by Johansen (2009) are important for leaders on some level, with strategic priorities and work conditions dictating which skills are most important.
3. Survey respondents will be consistent in determining the perceived importance of each skill as defined within the survey.

Delimitations and Limitations

Delimitations

Delimitations have to do with research scope and are boundaries beyond the concern of the study (Creswell, 2009). This study did not address basic skills (Wills, 1995) or enduring leadership skills (Johansen, 2007), nor did it seek to fully understand how the 10 new leadership skills are pragmatically applied to help organizations be successful in the VUCA world; rather, the study looked specifically at perceived importance of each skill and whether the most important skills are integrated into leadership development programs. This study focused on skills required of future leaders and did not explore the range of future work skills for all employee levels. In regard to the full range of workplace learning and development strategies, this study did not look at all areas of leadership development activity; rather, it focuses solely on researching five leadership development categories, all of which emphasize workforce preparation, as defined by CIPD & SHRM (2011):

1. Onboarding – organizational socialization to get new hires up to speed quickly

2. Executive coaching – a type of facilitative coaching designed to elevate high-potential employees' value
3. Career planning – structured formal process that aligns learning objectives to career goals
4. Leadership training – formal and informal learning opportunities designed to help leaders gain self-confidence and learn new skills, change behavior or reinforce newly-acquired skills
5. Succession planning – process and related programs for identifying and developing internal people to fill key positions within an organization

Limitations

Limitations have to do with conditions beyond the control of the researcher that may affect the conclusions of the study and their applications to other situations (Creswell, 2009).

While an ideal quantitative study would offer significant generalizability, a Midwest urban population, in a tertiary geography, may not be representative of a larger population in a major city. It also may not be representative of executive viewpoints around the globe. Therefore, results presented may not mirror results when the research is repeated in another market.

Additionally, although clear definitions for the 10 new leadership skills were provided, some survey respondents may have misunderstood a specific skill and, therefore lower the reliability of the results. Lastly, this study was not intended, nor was it designed, to reveal perceptions of individual contributors or development plans for individual contributors. It was designed to be responded to by senior-level leaders and addressed the skills and development plans only for formal leaders, as defined.

CHAPTER 2

REVIEW OF LITERATURE

The purpose of this study was to measure to what extent business leaders perceive the 10 new leadership skills as important. Specifically, the study measured perceived importance relative to addressing (a) strategic priorities, and (b) immediate pressing problems. Secondly, this study measured the extent the 10 new leadership skills are integrated into leadership development programs. This chapter reviews the importance and implications of VUCA within the context of leadership development. It includes sections addressing the military roots of VUCA, specific issues related to the VUCA landscape, leadership development trends, and the importance of learning and development as a key business strategy. The leadership development programs emphasized in this research and the 10 new leadership skills (Johansen, 2009, 2012) necessary for the 21st century leader are detailed. This review, according to Cooper's (1988) Taxonomy of Literature Reviews, is classified as follows:

1. Focus: The review focuses on leadership development practices and applications within the VUCA context.
2. Goal: The goal of the review is to assess importance of 10 new leadership skills (Johansen, 2009) and identify central issues related to programs designed to prepare leaders for leading in the VUCA world.
3. Perspective: The perspective is defined as a neutral representation of information found in the literature.
4. Coverage: This is an exhaustive review of literature mentioning VUCA and related issues with selective citation based on specific inclusion-exclusion criteria (Randolph, 2009).

5. Organization: The review is organized both historically and conceptually covering eight specific topics, including a historical perspective, issues pertaining to the VUCA landscape, relevance of contextual strategy, leadership development trends, emerging learning imperatives, learning and development as a competitive business strategy, 10 new leadership skills and an overview of survey research.
6. Audience: The audience for this review includes leadership scholars and leadership practitioners.

This review benefits from textbooks and articles published by peer-reviewed journals in the areas of strategy, leadership, organizational behavior, learning, and industrial psychology, as well as the perspective of well-respected business authors. The work of Bob Johansen (2007, 2009, 2010, 2011, 2012) is emphasized throughout the literature review and used as the foundation for the research study. Literature included was determined based on the following inclusion-exclusion criteria:

1. The source referred to VUCA directly or at least one of the VUCA conditions: volatility, uncertainty, complexity or ambiguity.
2. The source referred to one of the 10 leadership skills as defined by Johansen (2009, 2012).
3. The article or study reported information or results on at least one of the following five leadership development categories identified in the 2011 International Learning & Talent Development Comparison Survey (CIPD & SHRM, 2011); other categories were deemed out of scope for this review:
 - a. Onboarding – organizational socialization to get new hires up to speed quickly

- b. Executive coaching – a type of facilitative coaching designed to elevate high-potential employees' value
 - c. Career planning – structured formal process that aligns learning objectives to career goals
 - d. Leadership training – formal and informal learning opportunities designed to help leaders gain self-confidence and learn new skills, change behavior or reinforce newly-acquired skills
 - e. Succession planning – process and related programs for identifying and developing internal people to fill key positions within an organization
4. The source described survey methodology, particularly survey design that included even number Likert scale responses.
 5. For separate studies that used the same data or references, only the study with the most comprehensive reporting was included to avoid overrepresentation of a particular concept.

Historical Perspective

Although the 21st century began in 2001, the United States Army views its early inception in 1989 with the fall of the Berlin Wall and collapse of the Soviet Union (Hesselbein & Goldsmith, 2009). Since the end of the Cold War, the Army has seen massive organizational changes, including dramatic decreases in the number of soldiers, changes in policies, base closings, and an increase in deployments to support peace operations and national assistance. During this same period, Army leaders continued to prepare soldiers for the stresses of combat and the accelerated pace of change, specifically in how technological advances impacted the

ability to fight wars. Thinking strategically is fundamental to Army success, and Army leaders spend significant time preparing for the unknown.

First developed at the Army War College in Carlisle, Pennsylvania, VUCA was developed as a concept acronym to describe the increasing and changing complexity of the 21st century world (Hesselbein & Goldsmith, 2009; Johansen, 2007; Stiehm, 2002). VUCA quickly became a military mantra to help Army leaders prepare for the unknown (Stiehm, 2002) and, it became part of business vernacular in the late 1990s as a way to frame the existing and future leadership landscape for organizations of every size and in every market (Johansen, 2007; Stiehm, 2002).

VUCA Landscape

Leaders today are continually challenged to be agile enough to rapidly respond to a frequently changing business environment (Aberdeen Group, 2012). VUCA is not about a finite moment in time, a specific era, nor a set of circumstances that can be studied and responded to within a timeframe; rather VUCA represents a constantly changing environment – a set of timeless circumstances that challenge a leader’s ability to make decisions, develop plans, and execute flawlessly on a daily basis. VUCA is an acronym representing the prominent dangers of volatility, uncertainty, complexity, and ambiguity, and represents the context in which leaders and their organizations view current conditions and anticipate operating in their future state. Understanding and then reframing VUCA dangers into opportunities of vision, understanding, clarity and agility, is necessary in order for leaders to be positive change agents in the midst of constant chaos (Johansen, 2009, 2012).

VUCA Dangers and Opportunities

VUCA is described by Johansen (2009, 2012) within the context of dangers and opportunities. Although dangers are described in detail, opportunities are not. Rather, the positive outcome of turning a danger into an opportunity depends on the application of the new skills (Johansen, 2012). There are four dangers:

Volatility. Change today is not gradual and predictable; rather it is intermittent, unexpected and overwhelming. Volatile conditions require preparing for a range of uncertain threats and contingencies with skills of foresight to help predict or influence future events. Volatility, also referred to as instability, refers to the dynamic quality of the context for decision making and the degree of turbulence or rate of change (Hesselbein & Goldsmith, 2009; Paparone & Topic, 2011; Shaffer & Zalewski, 2011). Volatility exists when things change fast but without a predictable trend or repeatable pattern (Sullivan, 2012). Using a swamp metaphor, volatility is “like a bubbling, muddy, primordial mess...it assumes countless dynamics at work, making it difficult to define the problem or even appreciate the situation because the context quickly morphs before we can address it” (Paparone & Topic, 2011, p. 51). Turning this danger into an opportunity requires understanding and effectively dealing with volatile conditions which can then lead to having strategic vision for a better future state that may be completely unknown in the current state.

Uncertainty. Leaders today must cope with an overwhelming amount of information in a short amount of time. Correct interpretation is not always possible and new information is constantly presented. Uncertainty refers to “the measured or perceived likelihood that projections or predictions will be realized. Decision makers often need to anticipate the probable consequences of their actions despite knowing that their projections for the future are less than

certain” (Shaffer & Zalewski, 2011, p. 66). In an uncertain environment, the past is not necessarily an accurate predictor of the future. Often unclear about the present situation and future implications or outcomes, leaders must plan, organize and respond to all situations in a manner that allows for agility and continual adaptation. “Uncertainty is the recognition that what has happened before is not an accurate predictor of what will happen later. So, pre-existing answers or solutions (including technologies) are not available and maybe never will be” (Paparone & Topic, 2011, p. 51). Turning uncertainty into an opportunity requires having effective strategies for dealing with uncertain conditions which then lead to greater understanding of both a current situation and the potential outcomes of varying responses to the situation.

Complexity. Every event, process, and interaction is rooted in a web of interrelated factors. According to Shaffer & Zalewski (2011) complexity refers to the fact that causal factors or social forces at work in the situation are often competing with one another. Decision makers must often weigh the competing influences and make informed guesses about which forces will ultimately sway the outcome of critical events. (p. 66)

Leading in a complex world requires patience, strategic thinking skills, urgent action (Johansen, 2007), highly-tuned analytical skills, and in-depth knowledge of the relationships between people and systems within an organization. There is a multiplicity of key decision factors in most every situation, and complexity refers to the degree of interconnectedness and the resulting unpredictability of systems and situations (Paparone & Topic, 2011). A leader’s ability to view and respond to the many interdependencies of a complex situation leads to greater clarity of what

is most important in a given situation (Bolman & Deal, 2003; Lucchetti, 2009). Clarity then helps to turn complexity into an opportunity.

Ambiguity. In today's environment, facts are frequently obscured by the amount of information available, change is often riddled with contradiction and paradox, and leaders regularly lack clarity about the meaning of an event. Ambiguity refers to "the unknown significance of one or more factors in a situation" (Shaffer & Zalewski, 2011, p. 66).

Regardless, leaders must be able to make decisions when there are multiple interpretations of the circumstances and "must be able to expand their frame of reference to fit a situation, rather than reduce a situation to fit their preconceptions" (Hesselbein & Goldsmith, 2009, p. 117). Dealing effectively with ambiguity relies on a leader's ability to not under or over analyze specific situations, which is the key to developing the agility needed to respond to ambiguity and thrive in a VUCA world.

VUCA Drivers. Volatility, uncertainty, complexity and ambiguity define our current and future state. Economic drivers, such as global competition, volatile capital markets, fluctuating trade cycles, and rapidly evolving business models impact a leader's ability to make sustainable long-term decisions (Collins & Hansen, 2011; Horey et al., 2004). Other drivers, such as government regulations, disruptive technologies (Christensen, 1997), new media, and political upheaval also contribute to unrelenting instability and chronic uncertainty (Collins & Hansen, 2011). These drivers shape the evolution and future context of leadership. Fortune magazine business analyst, Geoff Colvin shared, "when people don't know what's going to happen, they freeze" (Colvin, 2010, par. 8). This phenomenon is known as uncertainty paralysis (McCarty, 2011) and leads to indecision and inaction. Thriving in a VUCA world involves not only understanding the dangers but developing new leadership capabilities to turn those dangers

into the opportunities of vision, understanding, clarity and agility. McCarty (2011) argues leaders must strengthen skills and strategies that combat the VUCA dangers to keep a leader viable, creative, and adaptable. Kevin Roberts, well known business maverick, likens the opportunity rising from the tough economic climate to The Edge—a biological theory proposing the development of most species does not grow at the center of a habitat; rather species develop and advance at the edge (Currie, 2012). At the center of a habitat, there is typically stability whereas the edges provide opportunity for increased tolerance of conditions and increased biodiversity (Donahoo, 2009). Applying The Edge theory to leadership, Roberts argues that challenges must be met with radical optimism and edgy behavior. The “world now is super-VUCA, which means it’s vibrant, unreal, crazy, astounding” (Currie, 2012, p. 24). Concurring, Johansen (2009) describes the VUCA environment as constantly expanding and evolving and warns, “What will be new in the years ahead is the scale and intensity of the likely disruptions” (p. 5).

Disruptive Technologies

Understanding the concept of disruptive technologies is important for understanding how to lead in a VUCA world. Christensen (1997) separates new technology into two categories: sustaining technologies and disruptive technologies. While sustaining technology allows for incremental improvements to an existing technology, disruptive technologies emerge unrefined and may not arise with a proven practical application. At some point, and unexpectedly, new disruptive technologies displace an established technology, causing organizational leaders to rethink strategies, restructure team priorities, and review their competitive landscape.

The telephone, originally invented as the electrical speech machine, is an example of a disruptive technology. When Alexander Graham Bell introduced the technology, it was not

widely available, accepted or desired; however, it quickly displaced the switchboard and telephone operator system. More recently, changes in the disk drive industry provide fodder for how disruptive technologies impact today's VUCA landscape. Changes in disk drive technology, market structure, global scope, and vertical integration have been pervasive, rapid, and unrelenting (Christensen, 1997). Sustaining technologies drove the industry to improve product performance in the areas of total capacity and recording density; by contrast, disruptive innovations redefined performance requirements significantly changing the size, weight, and cost of disk drives allowing those organizations poised for this change to seize new consumer attention and rapidly increase market share by quickly adopting the new technology. Despite an emphasis on sustainable innovations, organizations that embraced untraditional innovative methods were able to create competitive products that eventually became the new standard. It is this type of thinking that Johansen (2007, 2009, 2012) purports as positively impacting how leaders effectively function in the 21st century.

Today's organizations are typically structured to work with sustaining technologies, and leaders excel at market knowledge, customer interface, and process improvement. However, they often dismiss the value of an emerging technology and have trouble realizing how a new technology can provide potential efficiencies, cost-savings, or new opportunities until that technology actually matures. Johansen (2012) reminds us the world moves at a furious pace, and the characteristics of our future leaders – people he refers to as the digital natives – are shaped by a set of known and unknown facts that will likely be a disruptive force on a scale that we cannot yet conceive.

Digital Natives

By Johansen's (2012) definition, digital natives are sixteen years old or younger in 2012, who by interacting with digital technology from an early age, have a greater appreciation and grasp of its concepts. Digital natives

- ...will be the first generation in history to become adults in the emerging world of social media.
- ...have grown up with video gaming and the vivid user interfaces that gaming provides—as well as a lot of content that has been intensively violent and sexual.
- ...span class. What used to be called the “digital divide” is no longer an either/or. No matter how poor you are, you already have some access to connectivity—and the access will certainly grow. Rich people will have better access to more advanced digital tools, but poor people will still be connected and increasingly so.
- ...filter information differently than older people, given their experiences growing up with more robust media. (p. 11).

Johansen believes the digital natives will ultimately change the world, and he questions the extent to which digital natives will present disruptive power to how we function and lead in the VUCA world. Referring to the important future role of digital natives, Johansen poses questions we cannot yet answer but must consider as we plan for future leadership roles and development needs:

- Will their brains function differently from other generations—and if so, how?

- Will they have greater empathy due to their global connectivity...?
- Will cyber bullying be common among the digital natives?
- Will they lose some ability to concentrate and go deeply into subjects or could these abilities actually improve?...
- Will there be lingering impacts from early interactive exposure to overtly violent and sexual video games?
- How will the filtering skills ... play out in terms of their ability to make sense out of complexity? What about their ability to think, to concentrate, and to write? (p. 11-12).

Cloud-based Supercomputing

In addition to the presence and impact digital natives will have on leadership, another force shaping the future is referred to as cloud-based or cloud-served supercomputing. “The cloud is a set of services and technologies that enable the delivery of computing services over the Internet in real-time, allowing end-users instant access to data and applications from any device with Internet access” (Coolguys, 2011, p. 1). In essence, the network itself becomes the computer. Johansen (2012) argues that cloud-served supercomputing is a disruptive shift in how we connect globally and provides a completely new infrastructure for innovation.

- Cloud-served supercomputing will mean that many more people will have access to supercomputing capabilities through a variety of access devices to reach shared resources in the cloud.
- People will carry cloud-based filters with them and these filters will guide their shopping and many other aspects of everyday life.

- Cloud-served supercomputing will mean that many more people will have access to connectivity that used to be available only to very large organizations. (p. 13)

Johansen (2012) encourages leaders to consider these questions:

- What new models of connection, collaboration, and commerce will be possible through cloud-served supercomputing?
- How will cloud-based filters change the nature of brands, shopping, and advertising?
- Who will offer the best and the most popular trusted filters in the cloud?
- How will the digital natives develop new identities and new models of value exchange in the world of cloud-served supercomputing?

The answers to these questions provide leaders with new insight and perspective on how to plan, manage resources, lead teams and achieve results in the 21st century. Although Johansen (2007, 2009, 2012) acknowledges the job of a leader has not changed, he stresses the importance of understanding how the context of leadership has changed.

Contextual Framework

Today's competitive landscape is defined by the conceptual age (Pink, 2005). While the information age concentrated on the volume and abundance of data turning information into a commodity, the conceptual age is described as making sense of the overwhelming volume of information available. Pink references three prevailing trends that impact the future of business, leadership and the economy:

1. abundance, referring to the number of choices available to consumers,
2. the rise of Asia and profusion of outsourcing, and

3. the rapidity of automation, including massive computerization, advancements in robotics, and technology-driven processes.

These conditions thrive in the VUCA environment and challenge leaders to urgently develop strategies and skills to support their ability to effectively establish vision, make decisions, and mobilize their teams amidst constant flux. Sense-making, creativity, and the ability to synthesize, not just analyze, are vital skills for leaders of the future (Pietersen, 2010).

Students of leadership have been aware of these facts for a while. The concept of leadership itself hasn't changed; rather, the environmental context in which leaders must lead has changed.

Prahalad, and Ramaswamy (2004a) outlined challenges and new capabilities for the future. Their early work introduced the concept of “co-creation” of value where they argued how the Internet and the rise of abundant connectivity was leading to a new form of value creation, shaped by informed, empowered, and active individuals (Prahalad & Ramaswamy, 2000). Their continued research focused on how to best compete effectively in the future given the growing volatile and complex environment. They argued that consumer communities will evolve beyond an organization's control and potentially without the organization's knowledge, causing a disruptive shift in how relationships between leaders, employees, and customers are formed and nurtured. Leaders must therefore develop new customer relationship management capabilities, transform traditional manufacturing, logistics, and supply chain management processes, introduce flexible information infrastructure, promote contextual organization of data, and transform the managerial mind-set to facilitate the process of changing how people are socialized within an organization. Central to their premise in creating and managing new skills for the future is the notion of how as business models undergo dramatic and rapid change, and consumer communities become active influencers on product and service innovation, people

within the organization yearn for stability. They argue that new skills can only be introduced and honed if the organization's values and beliefs remain constant. Two specific skills needed for dealing with the uncertain future include "substantive knowledge of the consumer and the technologies underlying the business" (Prahalad & Ramaswamy, 2004b, p. 226) as well as a set of skills that combined allow a leader to quickly get things done within the context of the environment. Included are the enduring skills of interpersonal and team competence as well as intercultural competence and ongoing learning. Johansen (2012) underscores the importance of understanding consumer demands and the foundational technologies of a business as part of preparing for future leadership. Winning the battle for value creation requires all levels of leadership to understand the context of the future competitive environment and the consumers' influence on strategic decisions—combating complexity with simplicity and viewing strategy as an inseparable part of leadership are examples of characteristics needed for leadership excellence in the 21st century (Johansen, 2007; Pietersen, 2010; Prahalad & Ramaswamy, 2004a).

Leadership Development Trends

Leadership development trends mirror the complexity of the environment in which leaders lead. As the environment has become more complex and unpredictable, the skills needed for leadership have also changed. Heightened self-awareness, adaptability, collaboration and complex thinking abilities are among the highest ranked skills needed for today and tomorrow's leaders (Ahlrich, 2003; Capitalizing on Complexity, 2010; CCL, 2011; Johansen, 2007, 2009; Todd, 2010). These skills are not necessarily new; however, the environment in which they must be applied is increasingly more volatile and complex. Referring to the VUCA conditions during an analysis of organizational learning theories, Leavitt (2011) shares:

One of the primary drivers of organizational learning becoming an imperative for today's businesses is the need for enhanced learning processes as organizations move from relatively stable to relatively unstable environment conditions in our globalized marketplace. As trends in market conditions, competition, customer demands, technology, and other environmental areas evolve, companies, too, must rejuvenate and reinvent themselves for long-term survival and success. (p. 6)

Leavitt (2011) concludes, "the value of organizational learning is unmistakable as we see its ability to create competitive advantage in today's complex, dynamic, ambiguous, competitive marketplace" (p. 17). Specific to learning for leaders, the Center for Creative Leadership (CCL) (2011) reports speed and environmental adaptation as the two most critical elements impacting future leadership development.

This is no longer just a leadership challenge (what good leadership looks like), it is a development and pace challenge (the process of how to grow "bigger" minds quickly). Managers have become experts on the "what" of leadership, but novices in the "how" of their own development (p. 6).

Developing leaders within the context in which they lead is becoming increasingly more important. This requires an unprecedented customized approach and a transition away from organized methods of learning (such as training courses), toward individualized learning plans including specific job assignments, targeted mentor programs and self-directed study.

CCL (2011) reports four trends for the future of leadership development including:

1. A focus on vertical development (involving less time spent on general competencies and more time spent on specific development stages relevant to the leader and customized for the leader)

2. Increased leader ownership for self-development (moving away from human resources and manager-driven training to leader-led responsibility for learning and development metrics)
3. Greater emphasize on spreading leadership throughout the organization (transitioning away from identifying and preparing only high-potential individuals to creating conditions where leadership can flourish across all levels and functions of an organization)
4. Significant focus on innovation in leadership development methods (leveraging technology to create connective leadership communities and experiment with diverse ideas and learning approaches)

Trend #1: Customized Vertical Development

VUCA situations by their very nature require a customized response (Papparone & Topic, 2011). Therefore, customized strategic learning is integral to the needs of future leaders. Strategic learning involves five major themes: choices, clarity, change, courage and compassion (Pietersen, 2010). Choices involve the ability to focus on the fewest number of things that matter most, and it's critical for a leader to recognize and discern between development opportunities that will be most important and timely. Choices involve sacrifice and a propensity to discover superior insights. In order to make sound choices, leaders must have clarity about their own strengths and development needs amidst ambiguous circumstances. In a turbulent and confusing world, an essential leadership skill is the ability to simplify choices so they can be appreciated and acted on by everyone in the organization. Johansen (2009) argues clarity is a skill needed to make choices and that leaders can develop the skill of clarity at any stage of their growth. Making choices in today's unstable work environment requires leaders to sense and rapidly

respond to change on a continuous basis (Yukl, 2012). The ability to respond appropriately to change is cited as the single most important sustainable competitive advantage (Argyris & Schon, 1978; Johansen, 2007, Prahalad & Ramaswamy, 2004b). 21st century leaders will never have enough information to make risk-free decisions (Pietersen, 2010), and therefore, leadership requires courage. Confronting reality and remaining optimistic is core to having courage to lead in the future. To develop courage, leaders must accept assignments and situations with elements of risk and find opportunities to challenge their own viewpoints and learn new skills. The techniques of improvisation are also gaining wide acceptance in the area of leadership development and help leaders interpret their environment, quickly craft strategy and foster teamwork (Crossan, 1998; Kenan-Flagler Business School, 2012). Courage, coupled with compassion for oneself and others, will lead to improved relationships, greater productivity, and preserving the dignity and self-respect of everyone on the team.

Trend #2: Leader Self Development

Regardless of level, today's leaders must take serious ownership of personal development and must learn to learn more effectively to prepare themselves for future leadership challenges (CCL, 2011). There is widespread claim (Avolio, Walumbwa & Weber, 2009; CCL, 2011; Collins & Hansen, 2001; Davies, et al. 2011; Johansen, 2007, 2009; Senge, 1990; Yukl, 2012; Zenger & Folkman, 2002) that 21st Century leaders must be learning leaders. Senge (1990) describes a learning leader as an attentive leader who incessantly studies and acts upon environmental issues that advance corporate values and expand organization-wide knowledge and understanding. Senge (1990) highlights the profound responsibility leaders now have on creating organizations of workers who have the ability to learn, stating "Leaders are responsible

for building organizations where people continually expand their capabilities to understand complexity, clarify vision, and improve shared mental models – that is they are responsible for learning” (p. 340). Continuous learning is further emphasized by Sanaghan and Jurow (2011) when discussing VUCA’s impact on how institutions of higher education need to prepare leaders for the future. “As adaptive challenges become more common, no clear choices enable leaders and organizations to respond to the merging situation. Existing expertise, knowledge, and experience often do not apply. Instead, the new generation of problem solvers will find solutions through experimentation, risk-taking, creativity, new discoveries, and continuous learning” (p. 18). In a commentary discussing the concept of a consummate leader, Beeson (2011) includes “rigorously evaluating learning ability” (p. 39) as one of the top three ways to increase effectiveness of succession planning and leadership development. To maintain employability, “there is an increased focus on learning as a foundation of career growth as individuals assume responsibility for their own career development (Parker, Hall & Kram, 2008, p. 487). Regardless of the leadership paradigm or competency and skill model preferred, thought leaders and business practitioners agree that leadership entails character, knowledge and specific actions (Hesselbein & Goldsmith, 2009). Using the Army’s simple trilogy of be, know, and do, most base-line leadership skill standards address the need for leaders to be honest, competent, forward-looking and inspiring. They include a need for knowledge and mastery of four key skill areas, including interpersonal skills, conceptual skills, technical skills, and tactical skills, and they emphasize three types of action, including influencing skills, management skills, and leading change. When describing skill standards for 21st century leaders, Shrader (2010) shares, “Today’s world requires leaders who balance patience with ambition, who have wisdom rather than smarts, who have the experience and resilience to respond to the next crisis, and the one

after that.” He continues by saying “Agile leaders are not narrowly fixated on the straight-ahead. They turn around—they focus on what’s behind them, and what’s beside them. This 360-degree perspective and commitment is essential to the development and progression of future leaders and their successors” (p. 406). Despite high levels of unemployment, the VUCA world has resulted in new employment patterns leading to a significant talent shortage (Parker, Hall & Kram, 2008). Organizations are operating in the new normal (Wann, 2011) where business leaders have seen that required results can be achieved despite reduced resources, as long as the right people are employed and those people are committed to their own development. Leaders, themselves, are becoming a key differentiator for many organizations, and rivalry for top leadership positions is increasingly more competitive. More and more, companies seek leaders at all levels who have a demonstrable ability and commitment to learn (CCL, 2011, Horney, et. al, 2010).

Trend #3: Organization-wide Learning & Leadership

Over the past decade, there has been an ongoing debate among learning and talent development professionals about the relevance of non-mandatory training. Many theorists and practitioners argue in today’s environment businesses can only afford to invest in specialized technical and mandatory compliance training while others argue self-directed ongoing professional development in a wide range of areas is essential for preparing leaders of the future. At the pinnacle of this debate is the multitude of business authors, scholars, and trade professional surveys that cite a leader’s ability to learn as a major source of competitive advantage for organizations in the future (American Society for Training & Development [ASTD], 2009; Johansen 2007, 2009, 2012; Senge, 1990). As learning has become more important, a rise in the number of learning professionals and new types of learning positions,

have also emerged. Nearly 50% of today's organizations report either having or planning to have a global learning function as a key part of their strategy in order to effectively design and deliver learning and development on a global scale whereas less than 30% reported a global learning function in 2010 (ASTD, 2012). Twenty years ago, the concept of a chief learning officer (CLO) was unheard of. Today, CLO Magazine reports over 400 CLOs associated with Fortune 500 and Global 100 companies, and an increase in the number of organizational development, learning and talent management, and learning consultant professionals around the world (Kamikow, 2012). Many of these learning executives have been fortunate to have heard the late Malcolm Knowles share his favorite story about how Sony prepared its workers for the invention of the transistor. While competitors focused on understanding the technology, Sony chose to focus on the forecasted pace of assimilating new knowledge required and invested in a wide-range of seemingly unrelated learning opportunities for its employees. In an interview with Sony's CEO, Masaru Ibuka, he revealed Sony's strategy and attributed much to learning. "We knew learning was a skill. The more employees learned, the better learners they became. We knew continuous learning would make them more adaptive to new ways of manufacturing" (as cited in C. Bell, 2012, para. 4). Sony proved to its critics that learning to learn, regardless of content, was a critical skill and a competitive advantage.

Leadership development across an organization requires an emphasis on learning agility. Learning agility refers to a person's readiness and ability to learn from experiences. Self-awareness, openness to experience, motivation to learn, feedback seeking, and use of deliberate learning strategies combine to create an agile learner that can learn and adapt quickly to a changing environment. Dr. Rebecca Ray, senior vice president of Human Capital at The

Conference Board, a world-renowned independent research organization, speaks about VUCA and the need for learning agility.

Everyone will need learning agility—the ability to learn something in situation A and apply it in situation B. You have to maintain your footing between what you know and what you must learn. It's like hopping across a stream on a series of rocks. You stop, take your bearings, look ahead, and apply what you learned from previous hops. It's a VUCA [volatile, uncertain, complex, and ambiguous] world right now. The ability to articulate a clear path forward is getting more difficult. The more pressured and unstable the world gets, the easier it is to focus on the tactical and to forget that people continue to need a vision and to make meaning out of what they do. We must all learn to be comfortable with ambiguity and with making decisions before we reach our customary comfort levels. (P. Galagan, 2011, p. 2)

Trend #4: Innovation in Leadership Development Methods

Among many challenges, demographics, globalization, and international mobility of workers contribute to an increasingly diverse organizational population. 21st century leaders must be able to deal with the challenges of a corporation spread over many countries and many cultures. Even the smallest of geographically localized companies require highly trained and astute leaders to interact with diverse customers, overseas vendors, and the challenges of globalization and accelerated technology advancement (Hesselbein & Goldsmith, 2009). As globalization persists and digital connectivity increases, there is a profound shift in the content and delivery modalities required for future leadership development. Challenges cited by today's learning professionals include keeping pace with technology and emerging technical and process competencies that will aid in the future of leadership development.

Although traditional orientation and instructor-led training (ILT) initiatives continue to thrive in today's environment, the increase in self-directed e-learning, interactive social learning, mobile learning and blended strategies are rapidly becoming the new norm (ASTD, 2012) and are expected to escalate rapidly during the next decade (CCL, 2011). In the late 1980s and 1990s, many award-winning leadership training programs consisted of fully-integrated content, delivered in an instructor-led format over multiple days (Bentley, 2009). Today, technology-driven alternatives offer leaders the ability to learn at a self-directed pace and time. Content fragmentation, modularization, and real-time simulations or games are commonplace, and businesses demand more content in shorter amounts of time. The pace of change and need for fast decisions now demand that organizations provide ongoing learning opportunities for all employees and leadership development programs that apply accelerated learning strategies (Johansen, 2012; P. Galagan, 2011; Senge, 1990). Coates (2009) argues that to lead effectively in the fast-moving VUCA environment, a leader must develop the ability to quickly assess reality. Learning from reflective military logistics practice, leadership development in corporate America must shift attention from a focus on best practices and technical knowledge to facilitating context-rich knowledge and assumptions that "practitioners will be making sense of novel situations, inventing what to do as they are doing it, and reflecting on the situations as they are happening and in retrospect" (Paparone & Topic, 2011, p. 55).

Learning as a Competitive Strategy

The future of America's business leaders depends on aptitude for dealing with volatility, uncertainty, complexity and ambiguity (CCL, 2011; Johansen, 2010, Leslie, 2009). Understanding VUCA conditions is just the beginning. Thriving in the VUCA world demands a commitment to creating persistent learning opportunities. Many corporations are emphasizing

learning as a competitive strategy and the increasing need to develop existing leaders to succeed in the rapidly changing world (Manpower Group, 2011; Wann, 2011). At the same time, only one in five employers is concentrating on training and development to fill the leadership gap (Manpower Group, 2011). Other forms of learning—more sophisticated onboarding processes, executive coaching, mentoring, and self-directed learning assignments—are taking the place of traditional development methods. Those companies that do make an investment in learning and performance initiatives have been rewarded with enterprise-wide success. ASTD (2012) BEST Awards named 30 companies that use the learning function as a strategic business tool to achieve results. Each of these companies exhibited the link between learning and organizational strategy, and demonstrated how a focus on leadership development contributed to bottom-line results and a greater awareness of future leadership challenges. Although some of the companies reported traditional training and development efforts, many reported a blend of mandatory and non-mandatory strategies and an increase in self-directed strategic learning plans.

Organizations of the future require leaders who adapt quickly in shorter time frames than ever before (Hesselbein & Goldsmith, 2009; Johansen, 2007, 2009; Prahalad & Hamel, 1994b; Prewitt, et al., 2011). The 2011 International Learning & Talent Development Comparison Survey cites onboarding, executive coaching, career planning, leadership training, and succession planning as key venues for leadership development (CIPD & SHRM, 2011). This research study will focus first on the perceived importance of new skills (Johansen 2009, 2012) for the future. Then in follow-up to the skills perceived as most important, it will explore how the skills are integrated within the venues cited by CIPD & SHRM (2011) as most used for developing leadership skills.

Onboarding

CIPD & SHRM (2011) define onboarding as organizational socialization to get new hires up to speed quickly. The process of onboarding, also referred to as induction or orientation, helps new leaders build key relationships and acquire organizational and competitive knowledge. Traditional onboarding experiences have included reviewing policies, procedures, handbooks and codes of conduct. Progressive companies also promote self-guided activities that allow a leader to learn about both external focuses and internal challenges (ASTD, 2012).

Executive Coaching

According to O'Neill (2000), "the essence of executive coaching is helping leaders get unstuck from their dilemmas and assisting them to transfer their learning into results for the organization" (p. 5). Executive coaching is a developmental relationship critical to helping leaders strengthen their ability to learn at a pace and scale that is required in today's workplace (ASTD, 2012; Kram & Hall, 1996; Ragins & Kram, 2007). Mentoring and coaching are the most widely recognized terms used to describe developmental relationships and are increasingly used interchangeably (Watt, 2004). Traditional mentoring involves an experienced colleague supporting a high potential employee by helping them navigate the organization's political structure. Mentors provide mentees strategic assignments where achievements are visible and provide ongoing direction and feedback for continued improved performance (Ensher, Thomas & Murphy, 2001). Although some argue that the meanings can be easily confused (D'abate, Eddy & Tannenbaum, 2003; Ensher, Thomas & Murphy, 2001), in today's fast-paced and resource-poor environment, mentoring and coaching have assimilated and are often considered the same (Sperry, 1996; ASTD, 2012). For purposes of this study, all forms and generally-accepted definitions of coaching and mentoring are acceptable.

Career planning

Career planning refers to a systematic process of defining specific career objectives and specifying educational and developmental priorities and actions to further develop skills required to achieve both short- and long-term objectives (The SHRM Foundation, 2007). Career planning requires that leaders be perpetual learners with an emphasis on macro-level skills such as adaptability and learning how to learn (Hall, 2002), and requires leader initiative to work toward achieving professional goals. ASTD (2012) purports within an organization, career planning aims at matching an individual's career goals with the opportunities available within the organization. It is a means of achieving leader progression and organizational efficiency, not an end in itself. Career planning is most useful in a dynamic environment where competitive conditions and market strategies are rapidly changing.

Leadership Training

Leadership training includes both formal and informal learning opportunities designed to help leaders gain self-confidence and learn new skills, change behavior or reinforce newly-acquired skills (CIPD & SHRM, 2011). Typical leadership training modalities include classroom, workshop, virtual webinar, self-paced e-learning, or a blended approach. Leadership training provides leaders an opportunity to focus on specific issues related to managing and leading effectively. Common topics for leadership training today include advanced communication skills, ethical decision making, inclusionary team practices, performance management, and leading a change process. Regardless of topic or modality, leadership training typically involves an opportunity for self-reflection or assessment of specific skills, peer discussion or problem inquiry, and any number of activities that aid in the transfer of knowledge or skill to practical application (ASTD, 2012; Sorensen & Timmerman, 2012).

Succession Planning

The SHRM Foundation (2007) describes succession planning as a formal process that helps identify and prepare future leaders to fulfill important roles in an organization. Stressing the importance of planning for all leadership levels of an organization, the best succession programs are tailored and experiential, providing development opportunities as part of the ongoing work experience. Beyond replacement planning, succession planning identifies and develops successors on an ongoing basis. Although methods vary, there are a number of success factors for effective succession planning:

- Personal involvement by senior leaders
- Commitment by employees and emerging leaders to self-development
- Documented business case for long-term needs
- Linking succession planning efforts to strategic planning and investment for the future
- Regular analysis of workforce data
- Identification of competencies and skills used for leader selection and development
- A pool of talent that is identified and developed early for long-term succession

(R. Jenkins, personal communication, October 17, 2012)

10 New Leadership Skills

The leadership landscape has changed—it is more complex, volatile, and unpredictable. The skills needed for leadership have also changed. More complex and adaptive thinking abilities are needed, and in situations of rapid change, leaders must be flexible, resilient, and responsive. Successful 21st century leaders must thrive in chaos, doing their best work in unstable environments amidst fast moving change. There is agreement that skills needed for the

future are characterized by the underlying notion that leaders must prevail in chronic uncertainty (CCL, 2011; Collins & Hansen, 2011; Johansen, 2009, 2011).

Although enduring leadership skills, such as relationship building, managing performance, and driving innovation remain important, the context in which a leader must guide teams and drive results has changed significantly. Leaders must prepare their workforce for performing effectively in constant flux, and they must organize individual responsibilities and work processes in a way where employees are incented to invent and accept future shifting business models. For example, in the pharmaceutical industry, the emergence of personalized medicine and the shift from treatment toward a focus on prevention methods may eventually result in business models that promote heightened personalized patient planning with customized drug treatments based on a person's genetic structure (Osterwalder & Pigneur, 2010). Leaders faced with these challenges are forced to consider trends that may or may not materialize as the likelihood and timing are unknown. Despite technological feasibility, privacy laws may hinder certain treatment plans, and preventative medicine may continue to emerge and eventually become a significant growth area for the drug industry. However, it is equally likely that personal medicine might remain a fad for several years (Osterwalder & Pigneur, 2010). Regardless, leaders must stay alert and be prepared to respond to reality. Another example is the multitude of challenges that affected the airline industry over the past 40 years. Crippling recessions, interest-rate spikes, record number of bankruptcies, deregulation, increasingly irregular fuel prices, and the terrorist attacks of September 11 combined to create unprecedented volatile conditions (Collins & Hansen, 2011).

While VUCA is a fitting way of viewing the world, Johansen (2007, 2009, 2010, 2012) stresses its important application to overall leadership emphasizing that for a leader to thrive in

the VUCA world, a fundamentally different set of leadership skills will be required. This research study focused on the 10 leadership skills purported by Johansen (2009, 2012). The purpose of this study was to measure the extent business leaders in a Midwest urban city are incorporating the 10 new leadership skills into leadership development strategies. The study sought to first understand how business executives assess the importance of the 10 new leadership skills and then learn to what extent the skills are integrated into leadership development programs.

The 10 new leadership skills studied in this research were specific to organizational leaders and included:

1. Maker instinct – ability to exploit inner drive to build and grow things, as well as connect with others in the making;
2. Clarity – ability to make sense of clutter, to see through messes and contradictions to a future that others cannot yet see;
3. Dilemma Flipping – ability to turn dilemmas into advantages and opportunities;
4. Immersive learning – ability to learn from unfamiliar environments in a first-person way;
5. Bio-empathy – ability to see things from nature’s point of view; to understand, respect and learn from nature’s patterns;
6. Constructive depolarizing – ability to calm tense situations where communication has broken down, and bring people from divergent cultures toward constructive engagement;
7. Quiet transparency – ability to be open and authentic about what matters to you without advertising yourself;
8. Rapid prototyping – ability to create quick early versions of innovations with the expectation that later success will require early failures;

9. Smart mob organizing – ability to create, engage with, and nurture purposeful change networks through intelligent use of current media;
10. Commons creating – ability to seed, nurture and grow shared assets that benefit others and heightens competition.

These 10 new leadership skills are expanded upon later in this chapter and were specifically designed to create a profile of a new type of leader in response to a wide range of forecasts by the Institute for the Future (Johansen, 2009). These 10 new leadership skills have three key underlying assumptions:

1. Volatility, uncertainty, complexity, and ambiguity will get worse in the future.
2. The VUCA world is not simply dangerous; it is also filled with opportunities.
3. Leaders must learn new skills, which will be amplified by technological connectivity.

The formation of the 10 new leadership skills was influenced by eight enduring leadership principles, described in terms of the leader's ability to function effectively in the VUCA world:

1. Get There Early: The ability to anticipate when to move in order to get there early—but not too early.
2. Physical and Mental Exercise: The ability to stay healthy in an unhealthy world.
3. Active Attention: The ability to filter out noise and distraction, combined with a strong ability to stay centered—even when overwhelmed with stimuli.
4. Readiness Discipline: The ability to anticipate, prepare and practice.
5. Urgent Patience: The ability to know when to challenge and to comfort.
6. Story Telling and Listening: The ability to discover and tell engaging stories that help people imagine a future.

7. Humble Strength: The ability to act with courage and clear intent in an authentic, engaging, and self-effacing way.
8. Synchronicity: The ability to find meaning in coincidence. (Johansen, 2012, p. 21-23)

The skills studied also build upon and were shaped from 10 workplace skills originally outlined by the Institute for the Future in 2007:

1. Ping Quotient: A high level of proactive engagement and responsiveness to other people's requests for engagement.
2. Longbroadening: Ability to think in terms of higher level systems, bigger networks and longer cycles.
3. Open Authorship: Genuine desire and ability to work with multiple contributors to create content for public modification.
4. Cooperation Radar: An intuitive-like lens to seek out the best collaborators for a particular task.
5. Multi-Capitalism: Fluency in trading simultaneously with multiple hybrid capitals, including natural, intellectual, social, financial and virtual resources.
6. Mobbability: Ability to coordinate with many people simultaneously for extreme-scale collaboration.
7. Protovation: Ability to lower costs and increase the speed of failure through fearless innovation and rapid, iterative development cycles.
8. Influency: A high-level of persuasive ability through story telling in multiple social media spaces.
9. Signal/Noise Management: Ability to filter meaningful information and patterns from massively-multiple streams of data and advice.

10. Emerginsight: Ability to prepare for and handle surprising results and complex situations that arise from extreme-scale collaborative efforts. (Finley, 2009)

Finally, the new skills were informed by and align with 10 leadership skills for the future workforce, outlined by the Institute for the Future in 2009.

1. Sense-Making: Ability to determine the significance of what is being communicated.
2. Social Intelligence: Ability to connect to others in a deep and direct way.
3. Novel & Adaptive Thinking: Proficiency at thinking and creating solutions and responses beyond rules and policies.
4. Cross-Cultural Competency: Ability to operate in different cultural settings.
5. Computational Thinking: Deep understanding of data-based reasoning and ability to translate vast amounts of data into abstract concepts.
6. New-Media Literacy: Ability to critically assess, develop content using new forms of media, and leverage new media for persuasive communication.
7. Transdisciplinarity: Literacy in and ability to understand concepts across multiple disciplines.
8. Design Mindset: Ability to develop tasks and work processes for desired outcomes
9. Cognitive Load Management: Ability to discriminate and filter information to maximize cognitive functioning using a variety of tools and techniques.
9. Virtual Collaboration: Ability to work productively and drive engagement as a member of a virtual team. (Davies, et al., 2011, p. 8-12)

Emphasizing the importance of new skills specific to leaders, Johansen (2009) states, “In the VUCA world of volatility, uncertainty, complexity, and ambiguity, these ten future skills will be basic to successful leadership” (p. 147) and “connectivity will bring the leadership skills to life

and amplify their impact” (p. 165). Johansen (2012) also stresses that leaders must develop these skills in order to respond to external future forces and stresses the nomenclature “skills” should be viewed with the broadest meaning of the word. Johansen shares that he considered terminology of competencies, abilities, traits, and styles, and decided on skills to emphasize that these can be learned (p. 24). The skills can be used independently as well as together to provide a leader with the necessary strategies and tactics to respond appropriately to VUCA conditions.

Maker Instinct

“The maker instinct is an inner drive to build and grow things” (Johansen, 2012, p. 31). Johansen points out the instinct to make exists everywhere and within each person, reminding us of the many idioms we use daily such as making time, making money, making certain, making history, and making work (p. 28). “The maker instinct is basic and precedes all other skills that will be needed for future leadership” (p. 29). Johansen purports that leaders, by definition, are makers. “Leaders create the circumstances under which high-performing organizations become possible” (p. 29). “Leaders with maker instinct have a constant desire to improve the organizations around them (p. 32). In order to turn a natural instinct into a valuable skill, Johansen suggests leaders must first realize and value their own maker instinct and then nurture it by channeling the instinct to make it into leadership practices. “The maker instinct is key to making the future. Beyond *do-it-yourself*, leaders need to nurture *do-it-ourselves*. The maker instinct must be amplified by connectivity” (p. 28).

Johansen forecasts that leaders of the future will be considerably engaged with others and argues the best leaders will form, nurture, and grow inclusive networks that will promote growth and the ability to respond to constantly changing conditions. The maker instinct fuels that growth. Leaders will make the future in the context of the external future forces of the next

decade. Aligning with Johansen's emphasis on how smart networking will create profound results, Senge (1997) also stated, "Leadership in the future will be distributed among diverse individuals and teams who share responsibility for creating the organization's future" (p. 31). When faced with uncertainty, leaders of the future will find a way to kindle the maker energy within themselves and others in order to "...make the future and connect with others in the making (Johansen, 201, p. 41). At its most basic level, leading is simply making.

Clarity

In a VUCA world, clarity is essential for compelling leadership. Clarity refers to the ability to cope with messes and contradictions, to find direction in the middle of contradiction and to see a future state that others cannot yet see. Clarity requires deep understanding of self, having and recognizing an inner purpose, the ability to "make sharp statements about the future with an enthusiasm that attracts others," and flexibility of process (Johansen, 2012, p. 47). Honing the skill of clarity requires experiencing and embracing chaos (Lucchetti, 2009). Leaders who do not lead during difficult times will be at a disadvantage. Although leadership clarity is not a new concept, the VUCA world demands a heightened sense of clarity in order to temper uncertainty and make the future.

Dilemma Flipping

In 1936, F. Scott Fitzgerald made the following observation: "The test of a first-rate intelligence is the ability to hold two opposing ideas in the mind at the same time and still retain the ability to function" (para. 2). In 2012, Johansen shares that in the VUCA world leaders will often need to deal effectively with more than two opposing ideas. Johansen argues that 21st century leaders will rarely get the satisfaction of solving a problem; rather they will be faced with multiple dilemmas, which unlike problems, cannot be solved. "Problems will abound, but

top leaders will instead deal mostly with dilemmas for which there is no solution—but about which leaders will have to make decisions anyway” (Johansen, 2010, p. 21). Johansen emphasizes that dilemmas of the future are likely to induce feelings of hopelessness and that leaders must be able to flip dilemmas around to find advantages and opportunities. Dilemma flipping is defined as “reimagining an unsolvable challenge as an opportunity...the ability to put together a viable strategy when faced with a challenge that cannot be solved in traditional ways” (Johansen, 2012, p. 59). Johansen claims that future dilemmas will be unsolvable, recurrent, complex, threatening, confusing and potentially positive. To practice the skill of dilemma flipping, Johansen suggests the following techniques:

1. Standing in different places: I can change my point of view by turning the problem upside down.
2. Using lenses from other domains: If I am a scientist, I may visualize the dilemma from the point of view of a policymaker.
3. Ask powerful questions: I can immerse myself in possible scenarios and “what ifs.”
4. Foster new knowledge: I can spend time with others who are impacted by this dilemma and understand their point of view.
5. Create an innovation journal: It can be a public or private way to think through my questions.
6. Change the pace of attention: I can change the speed at which I approach this dilemma (p. 68).

“Dealing with dilemmas requires an ability to sense, frame, and reframe a situation. Reframing is stepping back, checking assumptions, and considering other ways of looking at a situation to

see what's really going on—and what *could* be going on” (p. 72). Leaders of the future will make the future by living with uncertainty, listening and making sense of dilemmas in order to decide how to make the future.

Immersive Learning

Immersive learning refers to close-up engagement in a wide range of first-person learning environments including simulations of reality, alternate-reality games, three-dimension online settings, role-play simulation games, immersive scenarios, mentoring, reverse mentoring, theatrical improvisation, and case studies. Johansen argues that variants of simulation and gaming provide the most safe and practical ways of learning in the VUCA World. For example, with its military roots, immersive learning games are fundamental to preparing leaders to deal with a variety of global crises. Students can experience the choices and trade-offs that must be made in the world of insurgent warfare without harming themselves and others during the learning process. Although the gaming industry has a reputation of over-exposure to overt violence and sexuality, Johansen (2012), argues games provide a venue for expanding thought, rethinking context and developing leadership skills. In addition to low-risk games and online social worlds, leaders who are immersed in situations of confusion and contradiction (versus leaders who deal only with routine problems) will obtain practical experience performing under pressure and will be able to develop important VUCA coping mechanisms.

Bio-empathy

Bio-empathy is the ability to see things from nature's point of view in order to learn from the natural cycles that surround us. Bio-empathy requires leaders to see the big picture of the organizational environment—its multiple interrelated parts, its linear and nonlinear relationships, and its cycles of change. In nature, everything is connected and a 21st century

leader must understand and respect the interconnectivity of systems, functions, people and processes as well as learn from nature's resilience to unforeseen forces. An example of how bio-empathy can be applied in an organizational setting is to look at the concepts of transparency and individuality. In nature, when there is a storm, everyone in the ecosystem can observe the impact of rain, sleet, snow or wind on the trees, earth, flowers and animals. In a business, transparency can be applied to how an office setting is structured, how management monitors activity, and what information is or isn't broadly shared. The more transparent an organization is, the more loyalty and productivity an organization enjoys (Johansen, 2009). Related to individuality, plants and animals thrive in their natural habitat. The same is true for people in business. Finding ways to honor the individual—his or her uniqueness, the strengths he or she brings and leveraging those, the more successful that individual and the whole organization will be. Developing bio-empathy requires a leader to listen, observe and appreciate the natural tendencies of humans and how they interact with systems. Leaders need to practice big-picture thinking and develop respect and tolerance for natural cycles of change.

Constructive Depolarizing

Constructive depolarizing is the ability to calm tense situations where communication has broken down, and the ability to bring people from divergent cultures toward constructive engagement. "Constructive depolarization is the maker instinct applied to conflict, an attempt to make polarization into dialogue. Constructive depolarizing begins with making calm" (Johansen, 2012, p. 113). Johansen emphasizes while clarity is critical, certainty is dangerous, and points out the more uncertainty a person experiences the greater the need to feel certain. The tension between clarity and certainty is a dilemma for leaders, and they must be able to redirect conflict toward constructive engagement and dialogue. Constructive depolarization involves

deep self-knowledge, superior communication skills, an element of media savvy, and reimagining what is possible. To hone the skill of constructive depolarizing, leaders first need to develop a level of cultural competency—an ability to listen and learn from people who are different from them. Leaders must offer consideration and respect to all viewpoints and exhibit a grace that makes engagement and reconciliation look easy. Reverse mentoring and role reversal are proven techniques for deepening listening ability and engaging with people on all sides of a conflict. In order to practice constructive depolarization, the next skill, quiet transparency, is needed.

Quiet Transparency

“Quiet transparency is the ability to be open and authentic about what matters without being overly self-promoting” (Johansen, 2012, p. 125). It begins with humility and giving up control, and requires leaders to develop their unique leadership voice by being authentic, open and resilient. Quiet transparency requires being silent and listening in order to create calm and anticipate a future state. In 1988, Mark Weiser coined the phrase “ubiquitous computing” referring to how machines fit the human environment, and shared how new technology would support the development of transparency, “Next comes ubiquitous computing, or the age of calm technology, when technology recedes into the background of our lives (as cited by Fallman, 2008, slide 13). Pervasive computing will provide new tools that promote transparency and leaders will be under much scrutiny from industry associations, regularly agencies, boards and consumers. In a society where we employ pervasive computing, office and manufacturing environments will have a variety of monitors, measurement devices, and information processors that are fully integrated into systems and processes. Leaders will not be able to hide information or their reaction to information. Quiet transparency is critical as leaders will need to expect their

thoughts, decisions and actions to be widely visible and scrutinized. It is important for leaders to realize that the fundamental architecture of pervasive computing networks grows from the edges and cannot be controlled.

Quiet transparency implies a high-level of openness and is “based on a premise of trust that, if you give ideas away, you will get even better ideas back in return. Open-source logic teaches that leaders will need to release exclusive ownership and have the faith to be transparent. In addition, they must contribute to a greater good which is emerging but not yet apparent” (Johansen, 2012, p. 132). “Combine open-source thinking with pervasive computing—a world with wireless connectivity and sensors everywhere—and you get many new opportunities to interact, exchange, and collaborate” (Johansen, 2012, p. 132). It is important to remember that transparent leaders combine vulnerability with self-confidence to create great strength.

Rapid Prototyping

Rapid prototyping is a leader’s ability to quickly create early versions of new products, processes or systems, fully expecting that later success will require several failures. Where traditional leadership supports thinking thoroughly before acting, rapid prototyping requires leaders to fail early in the process in order to be ultimately successful. “Making sense in the VUCA World requires immersion in that world with a learn-as-you-go style...rapid prototyping is the maker instinct applied to innovation. While the concept of do-it-yourself will still be important, the next generation of innovation will be driven by ‘do-it-ourselves’ leaders who don’t get stuck on the idea of ownership since in this process people’s ideas get mixed quickly and it is often impossible to sort out who thought of what” (Johansen, 2012, p. 141). Rapid prototyping is in essence the same trial-and-error method that innovators have always found

important; however, it uses a faster cycle. “The motto of rapid prototyping is to fail early, fail often, and fail cheaply as you make a better future” (Johansen, 2012, p. 140).

Leadership through rapid prototyping

- Is characterized by a trial-and-error mentality with an interest in starting quickly and learning continuously.
- Emphasizes experience in the field, rather than advance planning.
- Puts priority on extreme speed in learning.

To develop rapid prototyping, leaders must tap into their own maker instinct and the maker instinct of possible collaborators. They must embrace the iterative innovation process, accept failure as part of the process, and practice the ability to discern patterns across the prototypes.

Smart-mob Organizing

Smart-mob organizing is the leader’s ability to create, engage with, and nurture purposeful change networks through intelligent use of current media. It requires bringing large groups together for a common purpose and making savvy use of media to amplify the collective intelligence of the group. Mob refers to how the behavior of the group emerges and can be unpredictable or unruly. Smart refers to the deliberate use of resources, process, and media to organize collaborative thinking and make relevant connections. Free (2009) shared an example of early smart-mob organizing in the precision machined products industry. “One means to better understanding and dealing with today’s VUCA challenges is through effective associating. By combining the information you know with that of your peers, you construct a more informed view of our industry, customers and challenges.” (p.14). Martin (2012) shared another example of how Procter & Gamble entered into a strategic alliance, with a key competitor, relinquishing control in an unprecedented manner in an effort to create more consumer value. A.G. Lafley,

CEO, is quoted as sharing, “We weren’t the old Procter that had to have control, that had to dominate. This collaboration with a competitor—to build a successful leading brand business in a non-competitive space—was huge” (p.8). Martin (2012) further points out “there was little certainty...these were VUCA-laden choice points that called for the best strategic thinking.” (p. 8.) Wikipedia is another example of smart-mob organizing. In order to provide everyone in the world a comprehensive and free encyclopedia, Wikipedia’s creator, Jimmy Wales recognized the value of a smart mob community in which everyone can contribute to the body of knowledge and to the monitoring of the accuracy of information. Although the accuracy of Wikipedia information can be debated, the usage and dependency on it represents the built-in control for effective smart-mob organizing.

Commons Creating

A commons is a shared asset that benefits multiple people or organizations. Examples of commons include public parks, beaches, cooperative food stores, and the Internet. In business, commons creating refers to the leader’s ability to seed, nurture and grow shared assets that benefit others and heightens competition. A commons is a platform to build something that benefits the individual entities involved in the building as well as the group or extended community as a whole. For example, when a retailer offers free fine wine tasting events and builds enthusiasm among the participants for enjoying fine wine, many wine retailers in that community will benefit from future sales. The company that initiated the event benefits from positive exposure and the entire industry grows. There is a gray line between smart mobs and building commons. Smart mobs tend to have finite timeframes and emphasize one specific activity, where commons have continuity. Using the Wikipedia example, it took a smart mob to create the concept and it took creating commons to sustain it. Searching for new commons

entails looking for ideas, solutions and innovations that benefit multiple parties simultaneously. Creating commons gives leaders the opportunity to broaden the purpose of the organization and is the culmination of the other nine future leadership skills. Leaders with strong ability to create commons will be able to mobilize shared resources, develop sustainable engagement strategies and create new environment to make the future.

Core to the concept of commons creation is the concept of reciprocity. Although self-interest is important, the focus of reciprocity is on the potential value for a wide range of stakeholders. Creating commons requires there be contribution and value from everyone participating. It is not about gifts or sharing information—it is about creating something new together.

Research Questions & Survey Methodology

The following research questions were explored by survey method using descriptive and inferential statistical methods (Vogt & Johnson, 2011).

1. To what extent is each skill perceived as important relative to (a) addressing strategic priorities and (b) addressing immediate pressing problems?
2. Which skills are perceived as most important?
3. Is there a significant difference between industry demographics and perceived importance of each skill? .
4. Is there a significant difference between organization size and perceived importance of each skill?
5. What specific challenges and business priorities drive the perceived importance of the skills?

6. To what extent are the most important skills integrated into leadership development programs?
7. Does the current extent of integration differ from the expected integration in the future?

Chapter Summary

Researchers review literature so their new research can add to the body of knowledge (Plano Clark & Creswell, 2010). The goal of this chapter was to review relevant literature that provided a foundation for why understanding the VUCA World is important and why this research study is justified. Disruptive technologies, digital native influence, cloud-served supercomputing and the variety of VUCA conditions all contribute to a new leadership landscape. However, merely understanding the current and expected future state of VUCA will not prepare leaders to effectively meet business challenges. Finding opportunities and adopting new leadership capabilities is essential for future leadership success. To stay ahead of constantly shifting conditions and respond effectively to changing expectations, leaders must bridge the skills gap between their current capabilities and the skills needed to achieve goals. ASTD (2009) defines the skill gap as “the point at which an organization can no longer grow or remain competitive because it cannot fill critical jobs with employees who have the right knowledge, skills, and abilities” (p. 4). In a poll taken by 1,179 organizations, 79 percent reported skills gaps, with over half of those citing skills of the organization’s workforce not matching changes in strategy. Related, the category of leadership skills was reported as the number one skill gap (ASTD 2009, p. 9).

Each of the 10 new leadership skills purported by Johansen (2012) makes up a powerful set of leadership capabilities for the future. Connectivity is the thread that links the skills together, and each of the skills build on the previous skill to move from individual instinct to

collective action. The future cannot be predicted; however, it can be created based on paying attention to trends, forecasting effectively and taking specific actions to prepare for expected uncertainty (Johansen, 2007, 2009; Collins & Hansen, 2011). The literature indicates that this topic of research is important for the future of leadership:

- K. Bunker, change agent at the Center for Creative Leadership (CCL) concludes “More than ever before, successful leadership hinges on learning agility and the experience necessary to navigate and lead others through complex situations. It’s not the perfect pedigree or knowing all the answers anymore. It’s about resiliency and openness” (as cited in Johansen, 2012, p. 128).
- There is growing concern that skills needed for future success are lacking in today’s workplace competency and leadership models (Davies, Fidler, & Gorbis, 2011; Hesselbein & Goldsmith, 2009; Johansen, 2007, 2010)
- Leaders must flourish “despite the increasing complexity due to the interrelated and interdependent trends of globalization, technological innovation, sociological change, demographics, and more” (Hesselbein & Goldsmith, 2009).
- Organizations of the future require leaders who adapt quickly in shorter time frames than ever before (Hesselbein & Goldsmith, 2009; Prahalad & Hamel, 1994; Prahalad & Ramaswamy, 2004a; Prewitt, et al., 2011)
- “...to continue to manage talent and labor spend – and ensure strong business returns – organizations need to make sure that talent initiatives link to business performance. Organizations must walk the knife edge that is ensuring performance today while also building readiness for the future” (Aberdeen Group, 2012, p. 5).

- The future of America's business leaders depends on aptitude for dealing with volatility, uncertainty, complexity and ambiguity (CCL, 2011; Johansen, B., 2010; Leslie, 2009)
- “We expect that dramas of accelerating change, uncertainty, crisis and complexity will continue to form businesses and workplaces for the foreseeable future” (Konczak & Molloy, 2010, p. 5).
- “Leaders need to be open to new experiences, be reflective, and increase their comfort with concepts in a Volatile, Uncertain, Complex, and Ambiguous (VUCA) environment (Myers & Groh, 2010, p. 6).
- “The ten necessary leadership skills for success require intense future study ...” (Johansen, 2010).

Although there is ample literature describing the VUCA landscape and the need for new leadership skills, there are no existing published studies found that test the perception and utility of the 10 leadership skills in a practical business environment. This study is the first to research how these skills are, or are not, truly translated into today’s business environment in a Midwest urban geography. It reveals how business leaders view the importance of these specific skills and how they are preparing their leaders to develop these skills.

CHAPTER 3

METHODOLOGY

The purpose of this study was to measure to what extent business leaders perceive the 10 new leadership skills as important. Specifically, the study measured perceived importance relative to addressing (a) strategic priorities, and (b) immediate pressing problems. Secondly, this study measured the extent the 10 new leadership skills are integrated into leadership development programs. This research was based on a pragmatic paradigm (Creswell, 2009) and was conducted using quantitative survey research. A cross-sectional study design (Vogt & Johnson, 2011) using descriptive and inferential statistics was utilized. This chapter highlights accepted protocol for survey research, and includes information pertaining to the survey design, study population, data collection, and data analysis procedures.

Survey Research

Survey research “is a set of procedures that includes decisions about who to study, how to collect data, and how to report results” (Plano Clark & Creswell, 2010, p. 175). Survey research is not used to study how to change or predict how people think and act; rather, it is used in order to make inferences about the population being studied. Characteristics of survey research:

1. Examining attitudes, opinions, or behaviors of a large group
2. Choosing a large number of participants using random sampling (Vogt & Johnson, 2011)
3. Gathering information and describing trends in the data, emphasizing the average and range of responses
4. Making conclusions about the larger population

In essence, survey research provides a quantitative description of attitudes, tendencies, or opinions of a specific population by studying a sample of that population (Butin, 2010; Creswell, 2009; Fowler, 2009).

Survey Design

This study employed cross-sectional survey design (Creswell, 2009) and was the preferred method for this research because cross-sectional surveys allow a researcher to view the research topic and assess it within the current context, i.e. a snapshot in time, and the collection of data is managed at a single point in time involving a specified population. Cross-sectional surveys are often used to discover the frequency with which people perform certain behaviors or the number of people who have particular beliefs and attitudes (Creswell 2009; Gay, Mills, & Airasian, 2009). As the purpose of this study was to examine how leaders within a specified geography currently view the importance of new skills for the VUCA World and assess how leaders are incorporating the 10 VUCA skills into leadership development strategies, the cross-sectional survey was most appropriate. This study is also considered a correlational study (Hopkins & Antes, 1990) as it was set up to discover whether there is a relationship between various demographic variables, including industry and organization size, and to what degree the correlation exists. Correlational research involves collecting data to determine whether, and to what degree, a relation exists between two or more quantifiable variables (Gay, et al, 2009). This study was not intended to predict behavior or make conclusions about the direction of the relationship; its purpose was solely focused on examining whether a relationship exists and if so to what extent.

Survey research requires collecting quantifiable information in a consistent manner from all survey respondents (Creswell, 2009). The survey was designed in the form of an electronic

questionnaire. The advantages included easy dissemination, consistency in questions, and rapid turnaround for data collection. The questionnaire was administered electronically to 4179 member companies of the Greater Des Moines Partnership. The questionnaire was created using Qualtrics survey software and was emailed via link to the study population. The questionnaire consisted of both structured items, requiring a respondent to select from provided response options, as well as unstructured items, where the respondent was able to share context and clarification. A valid questionnaire must be designed to be brief, easy to respond to and provide an uncluttered format that is appealing to the study population. Following the guidelines provided by Gay, et al (2009), survey questions related directly to the objectives of the study, demographic information was collected in order to make comparison between subgroups, and each question focused on a single concept. Structured questions used in this survey were organized from general to specific and included:

1. scaled items, using a Likert scale of one to four.
2. ranked items, asking respondents to select top choices.
3. check-list items, asking respondents to check all current and planned leadership development activities related to the skills being studied.

Using a Likert scale was appropriate for this survey as it is the most widely used approach to understand direction and intensity of attitude to scaling responses for surveys that require self-reporting (Cheng, 1994; Wakita, Ueshima, & Noguchi, 2012). Likert scales are simple to construct, likely to produce a highly reliable scale and are easy for respondents to understand (D. Bertram, 2012). Likert scales produce quantitative data allowing data to be analyzed with relative ease. Most Likert scales utilize between four and seven categories depending on the goal of the research and the desired granularity of differences. Odd number

Likert scales allow for degrees of opinion as well as no opinion at all, whereas even number Likert scales require some degree of opinion. This study examined perceived importance and assumed that all 10 leadership skills are important on some level. It examined the space in which leaders are forced to discern which skills get immediate attention so it required a clear differentiation between whether a skill is perceived as somewhat important or highly important. To avoid neutrality, yet still provide respondents options for slight variation in response, a four-point scale was used. As respondents were asked to rate perceived importance on skills that may not have been widely known and understood, clear definitions were provided.

For questions that required ranking, standard competition ranking (Pozzi, 2008) was used. This ranking strategy allows for two or more items to tie for a position in the ranking and does not affect items ranked before or after the tied items. The use of check-list and unstructured free-response questions were limited to four questions as unstructured questions are often not responded to or yield confusing information (Gay, et al, 2009).

The questionnaire link was accompanied with a cover letter that explained the purpose of the study, emphasizing the target audience for both the respondents and the subject matter, and providing information about how the data would be used and reported back to the study population. “With self-administered questionnaires, it is especially valuable to provide a context for the survey as a whole” (University of Wisconsin Survey Center - Office of Quality Improvement, 2010). This study was endorsed by The Greater Des Moines Partnership, lending credibility to the study. Recipients were given three weeks to respond and received one reminder email two weeks after the original questionnaire link was sent and one reminder email two days prior to the survey being closed. As this study was anonymous, the reminder emails were sent to the original survey list.

Prior to conducting the research, the survey questionnaire was tested on two audiences: a group of nine professionals from the Greater Des Moines Partnership Diversity Council, representing a random representation of the target audience; and a group of 14 graduate level students at a local university. Small edits in the form of specific word choices and type of directions were made to the survey based on feedback related to readability, general understanding of terms, and completion time. Prior to sending the survey questionnaire to the full study population, the questionnaire was also piloted with two additional groups comprised of people who were similar to the study population. These pilots aided in honing the procedure for administering the survey and in validating content. Clear directions were provided on the questionnaire to help standardize the administration of the questionnaire and verify the likelihood of meaningful results. A copy of the cover letter used is found in Appendix D and a copy of the survey questionnaire is found in Appendix E.

Study Population

The study population was comprised of senior executives who are members of The Greater Des Moines Partnership chamber. An electronic survey was sent to the 4179 member companies of the Greater Des Moines Partnership, and expected response rate was 6%. This response rate was based on the historical responses of the Greater Des Moines Partnership Workforce Survey. Description data, including responder's gender, age, title category, industry, and organization size was collected.

Data Collection

The survey was created in Qualtrics survey software and was sent via link directly from the Greater Des Moines Partnership. Data was collected using the online survey and was anonymous. Although a unique url identifier was used to curtail any duplication of responses,

respondents were not required to provide personal information such as name, social security number, or specific place of employment. Like all surveys, the validity of the Likert scale measurement can be compromised due to social desirability, meaning respondents may have lied to put themselves in a positive light or may have responded with what they perceive is a right answer. Offering anonymity on self-administered questionnaires is known to reduce social pressure, and therefore reduce social desirability bias (McLeod, 2008).

The cross-sectional survey design was used to identify correlative relationships and differences in sub groups, such as gender, age and educational level. This study first sought to understand the perceived importance of each skill. The dependent variable was the perceived importance of each skill. Independent variables included industry demographics and organization size. Leadership level of respondent was collected but not used for comparison in this study.

Industry Demographics

A list of industries provided by the Greater Des Moines Partnership was used to collect, sort and categorize information. During analyses, the list was consolidated to represent organizations within the categories of industrial, financial services, human services, and other companies. The full list of industries is attached as Appendix C.

Organization Size

The study's survey defined organization size using an existing 2012 workforce Survey (Greater Des Moines Partnership, 2012). Categories included:

1. 5000 + employees
2. 1000 – 4999 employees
3. 500 – 900 employees
4. 250 – 499 employees

5. 50 – 99 employees
6. 10 – 49 employees
7. < 10 employees

During analyses, organization size was grouped into three categories:

1. < 50 employees
2. 50-499 employees
3. 500 + employees

Leadership Level

This study segmented respondent's leadership level by the following categories based upon an existing delineation provided by the Greater Des Moines Partnership:

1. C-level executive (example titles: CEO, CFO, COO, CTO, CLO, CIO)
2. Senior executive (example titles: SVP, VP, AVP, President)
3. Director-level (example titles: Director, General Manager, Executive Director)
4. Mid-manager (example titles: Manager)
5. Front-line manager (example titles: Manager, Supervisor)

Data Analysis

This study assumed all 10 leadership skills are important on some level, and strategic priorities and work conditions dictate which skills are most important. The research showed the extent each skill is perceived as important relative to (a) addressing strategic priorities, and (b) addressing immediate pressing problems. Descriptive statistics (Hopkins & Antes, 1990) was used to summarize the study population, and initial data screening was conducted to see if data met the assumptions of data normality (Tabachnick & Fidell, 2007). A Shapiro Wilks test (Green & Salkind, 2011) was conducted because the sample size was less than 2000. Originally,

the research plan included analysis of variance (ANOVA) testing; however, the normality test dictated the use of non-parametric statistics, so a Kruskal-Wallis non-parametric test (Vogt & Johnson, 2011) was used to study any differences in responses between industries and organization size. As Cross-sectional surveys are not concerned with changes over time, any generalizations made about this research in the next two chapters are used in the context of understanding current reality.

The following research questions and statistical methods guided the analysis of this study:

1. To what extent is each skill perceived as important relative to (a) addressing strategic priorities and (b) addressing immediate pressing problems? This question was analyzed using descriptive statistics and is presented in a frequency distribution table.
2. Which skills are perceived as most important? This question was analyzed using descriptive statistics and presented in table format.
3. Is there a significant difference between industry demographics and perceived importance of each skill? A Kruskal-Wallis non-parametric test was used to compare medians to see if there were statistically significant differences among industries.
4. Is there a significant difference between organization size and perceived importance of each skill? A Kruskal-Wallis non-parametric test was used to compare medians to see if there were statistically significant differences among the various size organizations.
5. What specific challenges and business priorities drive the perceived importance of the skills? This question was analyzed using descriptive statistics and is presented by grouping data into common themes.

6. To what extent are the most important skills integrated into leadership development programs? This question was analyzed using descriptive statistics and is presented in a frequency distribution table.
7. Does the current extent of integration differ from the expected integration in the future? This question was analyzed using descriptive statistics and is presented in a frequency distribution table.

Chapter Summary

This chapter summarized survey research and this study's survey design, study population, data collection and analyses approach. The survey contained 14 questions with a focus on measuring the perceived importance of the skills. Two questions examined to what extent the most important skills are integrated into leadership development plans. Measures to assure content validity, data normality, and successful administration of the survey were described and variables were defined. Data analyses included descriptive and inferential statistics, including the use of frequency distribution tables and Kruskal-Wallis non-parametric tests.

CHAPTER 4

RESULTS

The purpose of this study was to measure to what extent business leaders perceive the 10 new leadership skills as important. Specifically, the study measured perceived importance relative to addressing (a) strategic priorities, and (b) immediate pressing problems. Secondly, this study measured the extent the 10 new leadership skills are integrated into leadership development programs. This study was based on a pragmatic paradigm (Creswell, 2009) and was conducted using quantitative survey research. This study assumed all 10 leadership skills are important on some level with strategic priorities and work conditions dictating which skills are most important. This chapter presents the process of data cleaning (Vogt & Johnson, 2011) and calculated outcome rates, frequencies and descriptive characteristics of the survey respondents, and the analyses for each individual research question.

Data Cleaning and Outcome Rates

An electronic survey was sent to 4179 member companies of the Greater Des Moines Partnership in conjunction with the annual Greater Des Moines Partnership Workforce Survey. Outcome rates were calculated according to The American Association for Public Opinion Research (AAPOR) outcome calculation standards (2011). Three outcome rates were reviewed.

1. Response rate – the number of completed surveys divided by the number of eligible reporting units in the sample. Partially completed surveys were removed and cases of unknown eligibility were not considered in order to avoid inflating the response rate.
2. Contact rate – the number of opened surveys divided by the number of eligible reporting units in the sample.

3. Cooperation rate – the number of surveys started (including full and partially completed) divided by the number of total eligible contacts in the sample. Two cooperation rates are reported: the minimum cooperation rate which assumes all reporting units are considered eligible contacts; and a maximum cooperation rate which assumes one third of total contacts to be eligible based on the average number of registered contacts within the businesses represented in the sample.

Of the 4179 surveys sent, 989 surveys were undeliverable and 196 surveys were opened. Of the 196 surveys opened, 142 surveys were started. Of the 142 surveys started, 75 surveys contained records that excluded key variables and were removed from analyses due to incomplete data. Analyses were then conducted using 67 complete surveys, representing a 2.1% cleaned data response rate, 6.14% contact rate, 4.45% minimum cooperation rate, and 13.35% maximum cooperation rate. Although non-response bias (Tabachnick & Fidell, 2007) could not be tested, sample descriptives were reviewed and did match population descriptives, indicating non-response bias may not exist.

Frequencies and Descriptive Characteristics

Descriptive statistics were run for each of the independent variables in this study as well as demographic information related to the participants. Table 4.1 reports the results of descriptive analyses for demographic and independent variable data. As data used are nominal scale (Vogt and Johnson, 2011), statistics are reported in the format of a frequency table. Survey recipients were instructed to have a director-level or senior executive complete the survey. Results indicate 59 respondents, representing 88% of total responses, were collected from the intended audience.

Table 4.1

Descriptive Statistic Frequencies for Demographic Data, Independent Variables (n=67)

Variables	Frequency	Percent	Valid Percent
Gender of Respondents			
Male	36	53.7	53.7
Female	31	46.3	46.3
Total	67	100.0	100.0
Leadership Level of Respondents			
C-level executive	20	29.9	29.9
Senior executive	23	34.3	34.3
Director level executive	16	23.9	23.9
Mid-manager	3	4.5	4.5
Front-line manager	1	1.5	1.5
Other	4	6.0	6.0
Total	67	100.0	100.0
Company Status			
Private for Profit	40	59.7	60.6
Private Nonprofit	13	19.4	19.7
Public	13	19.4	19.7
Total	66	98.5	100.0
Missing	1	1.5	
Total	67	100.0	
Company Industry			
Industrial	12	17.9	18.2
Financial Services	25	37.3	37.9
Human Services	17	25.4	25.8
Other	12	17.9	18.2
Total	66	98.5	100.0
Missing	1	1.5	
Total	67	100.0	
Company Size			
Fewer than 50 EES	28	41.8	41.8
50 – 499 EES	26	38.8	38.8
500+ EES	13	19.4	19.4
Total	67	100.0	100.0

As a baseline frame of reference, respondents were asked to describe how prepared their workforce currently is to effectively deal with the VUCA dangers of volatility, uncertainty, complexity and ambiguity. Only 11 respondents, representing 16.4% of total responses, indicated their workforce is fully prepared to deal with the VUCA conditions. Results of this question are shown in Figure 4.1.

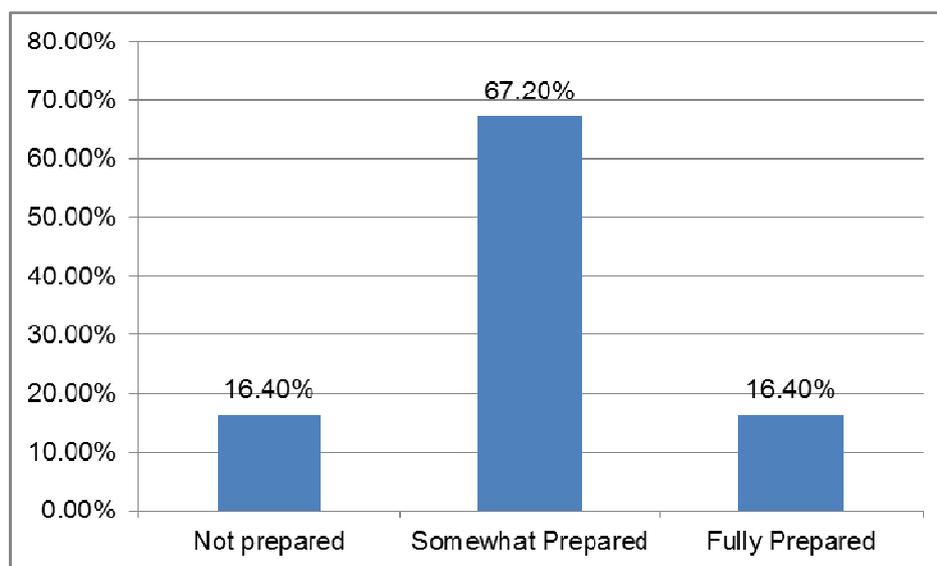


Figure 4.1: Level of Perceived Preparedness

Analyses of Research Questions

Data analyzed in this study were nominal and ordinal data. Prior to analyses, a Shapiro Wilks normality test (Green & Salkind, 2011) was conducted to determine whether data met the assumptions of normality. Test results revealed data did not meet distributional assumptions of normality. Therefore, data were analyzed using descriptive and non-parametric statistics (Vogt & Johnson, 2011). The following paragraphs state each research question followed by results of the analyses. When percentages are cited, valid percent is used to accommodate missing cases within the data set.

Research Question 1

To what extent is each skill perceived as important relative to (a) addressing strategic priorities and (b) addressing immediate pressing problems?

Maker Instinct. Of the total number of respondents, 87.9% of respondents indicated this skill is important at some level for addressing strategic priorities with 40.9% viewing this skill as very important. Of the total number of respondents, 65.6% of respondents indicated this skill is at some level important for addressing immediate pressing problems with 18.8% viewing this skill as very important. Table 4.2 provides frequency statistics for the perceived importance of Maker Instinct.

Table 4.2

Frequency Distribution; Perceived Importance of Maker Instinct for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Maker Instinct			
(Importance for Strategic Priorities)			
Not Important	8	11.9	12.1
Somewhat Important	9	13.4	13.6
Important	22	32.8	33.3
Very Important	27	40.3	40.9
Total	66	98.5	100.0
Missing	1	1.5	
Total	67	100.0	
Maker Instinct			
(Importance for Immediate Pressing Problems)			
Not Important	22	32.8	34.4
Somewhat Important	9	13.4	14.1
Important	21	31.3	32.8
Very Important	12	17.9	18.8
Total	64	95.5	100.0
Missing	3	4.5	
Total	67	100.0	

Clarity. Of the total number of respondents, 98.5% of respondents indicated this skill is important at some level for addressing strategic priorities, with 56.1% viewing this skill as very important. Of the total number of respondents, 100% of respondents indicated this skill is at some level important for addressing immediate pressing problems, with 67.2% viewing this skill as very important. Table 4.3 provides frequency statistics for the perceived importance of Clarity.

Table 4.3

Frequency Distribution; Perceived Importance of Clarity for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Clarity			
(Importance for Strategic Priorities)			
Not Important	1	1.5	1.5
Somewhat Important	6	9.0	9.1
Important	22	32.8	33.3
Very Important	37	55.2	56.1
Total	66	98.5	100.0
Missing	1	1.5	
Total	67	100.0	
Clarity			
(Importance for Immediate Pressing Problems)			
Important	21	31.3	32.8
Very Important	43	64.2	67.2
Total	64	95.5	100.0
Missing	3	4.5	
Total	67	100.0	

Dilemma Flipping. Of the total number of respondents, 100% of respondents indicated this skill is important at some level for addressing strategic priorities, with 37.3% viewing this skill as

very important. Of the total number of respondents, 100% of respondents also indicated this skill is at some level important for addressing immediate pressing problems, with 46.9% viewing this skill as very important. Table 4.4 provides frequency statistics for the perceived importance of Dilemma Flipping.

Table 4.4

Frequency Distribution; Perceived Importance of Dilemma Flipping for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Dilemma Flipping			
(Importance for Strategic Priorities)			
Somewhat Important	11	16.4	16.4
Important	31	46.3	46.3
Very Important	25	37.3	37.3
Total	67	100.0	100.0
Dilemma Flipping			
(Importance for Immediate Pressing Problems)			
Somewhat Important	4	6.0	6.3
Important	30	44.8	46.9
Very Important	30	44.8	46.9
Total	64	95.5	100.0
Missing	3	4.5	
Total	67	100.0	

Immersive Learning. Of the total number of respondents, 89.4% of respondents indicated this skill is important at some level for addressing strategic priorities, with 24.2% viewing this skill as very important. Of the total number of respondents, 85.7 of respondents indicated this skill is at some level important for addressing immediate pressing problems, with 27.0% viewing this skill as very important. Table 4.5 provides frequency statistics for the perceived importance of Immersive Learning.

Table 4.5

Frequency Distribution; Perceived Importance of Immersive Learning for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Immersive Learning (Importance for Strategic Priorities)			
Not Important	7	10.4	10.6
Somewhat Important	16	23.9	24.2
Important	27	40.3	40.9
Very Important	16	23.9	24.2
Total	66	98.5	100.0
Missing	1	1.5	
Total	67	100.0	
Immersive Learning (Importance for Immediate Pressing Problems)			
Not Important	9	13.4	14.3
Somewhat Important	12	17.9	19.0
Important	25	37.3	39.7
Very Important	17	25.4	27.0
Total	63	94.0	100.0
Missing	4	6.0	
Total	67	100.0	

Bio-Empathy. Of the total number of respondents, 78.8% of respondents indicated this skill is important at some level for addressing strategic priorities, with 9.1% viewing this skill as very important. Of the total number of respondents, 66.7 of respondents indicated this skill is at some level important for addressing immediate pressing problems, with 6.3% viewing this skill as very important. Table 4.6 provides frequency statistics for the perceived importance of Bio-Empathy.

Table 4.6

Frequency Distribution; Perceived Importance of Bio-Empathy for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Bio-Empathy			
(Importance for Strategic Priorities)			
Not Important	14	20.9	21.2
Somewhat Important	34	50.7	51.5
Important	12	17.9	18.2
Very Important	6	9.0	9.1
Total	66	98.5	100.0
Missing	1	1.5	
Total	67	100.0	
Bio-Empathy			
(Importance for Immediate Pressing Problems)			
Not Important	21	31.3	33.3
Somewhat Important	30	44.8	47.6
Important	8	11.9	12.7
Very Important	4	6.0	6.3
Total	63	94.0	100.0
Missing	4	6.0	
Total	67	100.0	

Constructive Depolarizing. Of the total number of respondents, 86.6% of respondents indicated this skill is important at some level for addressing strategic priorities, with 37.3% viewing this skill as very important. Of the total number of respondents, 98.4% of respondents indicated this skill is at some level important for addressing immediate pressing problems, with 69.8% viewing this skill as very important. Table 4.7 provides frequency statistics for the perceived importance of Constructive Depolarizing.

Table 4.7

Frequency Distribution; Perceived Importance of Constructive Depolarizing for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Constructive Depolarizing			
(Importance for Strategic Priorities)			
Not Important	9	13.4	13.4
Somewhat Important	17	25.4	25.4
Important	16	23.9	23.9
Very Important	25	37.3	37.3
Total	67	100.0	100.0
Constructive Depolarizing			
(Importance for Immediate Pressing Problems)			
Not Important	1	1.5	1.6
Somewhat Important	5	7.5	7.9
Important	13	19.4	20.6
Very Important	44	65.7	69.8
Total	63	94.0	100.0
Missing	4	6.0	
Total	67	100.0	

Quiet Transparency. Of the total number of respondents, 98.5% of respondents indicated this skill is important at some level for addressing strategic priorities, with 57.6% viewing this skill as very important. Of the total number of respondents, 100% of respondents indicated this skill is at some level important for addressing immediate pressing problems, with 57.1% viewing this skill as very important. Table 4.8 provides frequency statistics for the perceived importance of Quiet Transparency.

Table 4.8

Frequency Distribution; Perceived Importance of Quiet Transparency for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Quiet Transparency			
(Importance for Strategic Priorities)			
Not Important	1	1.5	1.5
Somewhat Important	6	9.0	9.1
Important	21	31.3	31.8
Very Important	38	56.7	57.6
Total	66	98.5	100.0
Missing	1	1.5	
Total	67	100.0	
Quiet Transparency			
(Importance for Immediate Pressing Problems)			
Somewhat Important	4	6.0	6.3
Important	23	34.3	36.5
Very Important	36	53.7	57.1
Total	63	94.0	100.0
Missing	4	6.0	
Total	67	100.0	

Rapid Prototyping. Of the total number of respondents, 83.3% of respondents indicated this skill is important at some level for addressing strategic priorities, with 31.8% viewing this skill as very important. Of the total number of respondents, 58.1% of respondents indicated this skill is at some level important for addressing immediate pressing problems, with 8.1% viewing this skill as very important. Table 4.9 provides frequency statistics for the perceived importance of Rapid Prototyping.

Table 4.9

Frequency Distribution; Perceived Importance of Rapid Prototyping for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Rapid Prototyping			
(Importance for Strategic Priorities)			
Not Important	11	16.4	16.7
Somewhat Important	17	25.4	25.8
Important	17	25.4	25.8
Very Important	21	31.3	31.8
Total	66	98.5	100.0
Missing	1	1.5	
Total	67	100.0	
Rapid Prototyping			
(Importance for Immediate Pressing Problems)			
Not Important	26	38.8	41.9
Somewhat Important	15	22.4	24.2
Important	16	22.4	24.2
Very Important	5	7.5	8.1
Total	62	92.5	100.0
Missing	5	7.5	
Total	67	100.0	

Smart-Mob Organizing. Of the total number of respondents, 91% of respondents indicated this skill is important at some level for addressing strategic priorities, with 32.8% viewing this skill as very important. Of the total number of respondents, 57.1% of respondents indicated this skill is at some level important for addressing immediate pressing problems, with 9.5% viewing this skill as very important. Table 4.10 provides frequency statistics for the perceived importance of Smart-Mob Organizing.

Table 4.10

Frequency Distribution; Perceived Importance of Smart-Mob Organizing for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Smart-Mob Organizing			
(Importance for Strategic Priorities)			
Not Important	6	9.0	9.0
Somewhat Important	17	25.4	25.4
Important	22	32.8	32.8
Very Important	22	32.8	32.8
Total	67	100.0	100.0
Smart-Mob Organizing			
(Importance for Immediate Pressing Problems)			
Not Important	27	40.3	42.9
Somewhat Important	14	20.9	22.2
Important	16	23.9	25.4
Very Important	6	9.0	9.5
Total	63	94.0	100.0
Missing	4	6.0	
Total	67	100.0	

Commons Creating. Of the total number of respondents, 73.8% of respondents indicated this skill is important at some level for addressing strategic priorities, with 21.5% viewing this skill as very important. Of the total number of respondents, 62.5% of respondents indicated this skill is at some level important for addressing immediate pressing problems, with 14.1% viewing this skill as very important. Table 4.11 provides frequency statistics for the perceived importance of Commons Creating.

Table 4.11

Frequency Distribution; Perceived Importance of Commons Creating for Addressing Strategic Priorities and Addressing Immediate Pressing Problems (n=67)

Variable	Frequency	Percent	Valid Percent
Commons Creating			
(Importance for Strategic Priorities)			
Not Important	17	25.4	26.2
Somewhat Important	8	11.9	12.3
Important	26	38.8	40.0
Very Important	14	20.9	21.5
Total	65	97	100.0
Missing	2	3.0	
Total	67	100.0	
Commons Creating			
(Importance for Immediate Pressing Problems)			
Not Important	24	35.8	37.5
Somewhat Important	14	20.9	21.9
Important	17	25.4	26.6
Very Important	9	13.4	14.1
Total	64	95.5	100.0
Missing	3	4.5	
Total	67	100.0	

Research Question 2

Which skills are perceived as most important?

Tables 4.12 and 4.13 show the three most important skills for addressing strategic priorities and the three most important skills for addressing immediate pressing problems. Clarity and Dilemma Flipping respectively are perceived as the top two skills for both addressing strategic priorities and immediate pressing problems. Maker Instinct is perceived as the third most important skill for addressing strategic priorities whereas Constructive Depolarizing is perceived as the third most important skill for addressing immediate pressing problems.

Table 4.12

Frequency Distribution; Top Three Skills for Addressing Strategic Priorities

Variables	Frequency	Percent	Valid Percent
Clarity	52	77.6	100.0
Dilemma Flipping	44	65.7	100.0
Maker Instinct	39	58.2	100.0

Table 4.13

Frequency Distribution; Top Three Skills for Addressing Immediate Pressing Problems

Variables	Frequency	Percent	Valid Percent
Clarity	59	88.1	100.0
Dilemma Flipping	52	77.6	100.0
Constructive Depolarizing	51	76.1	100.0

Figures 4.2 and 4.3 illustrate in bar graph form all 10 leadership skills and their perceived importance relative to each other.

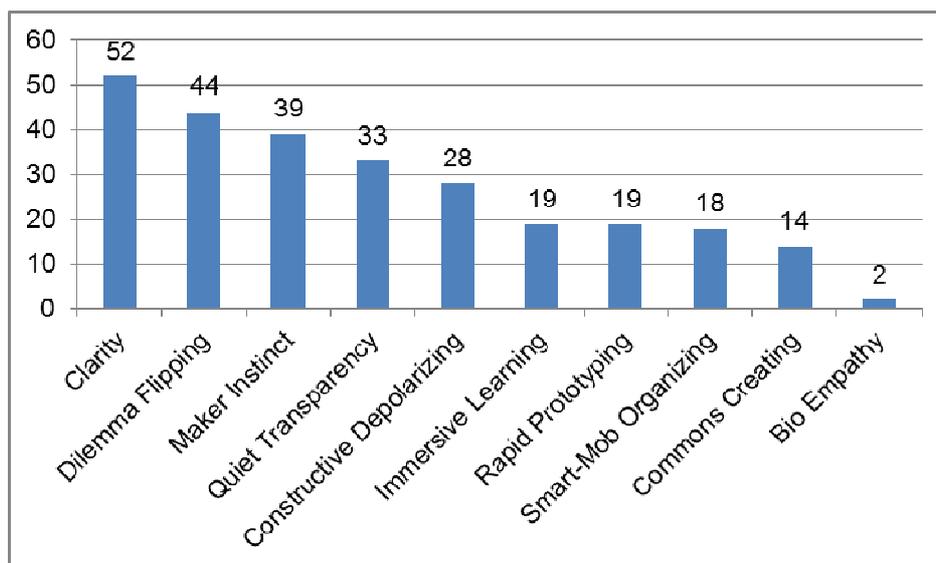


Figure 4.2 Perceived Importance of Skills Relative to Each Other; Strategic Priorities

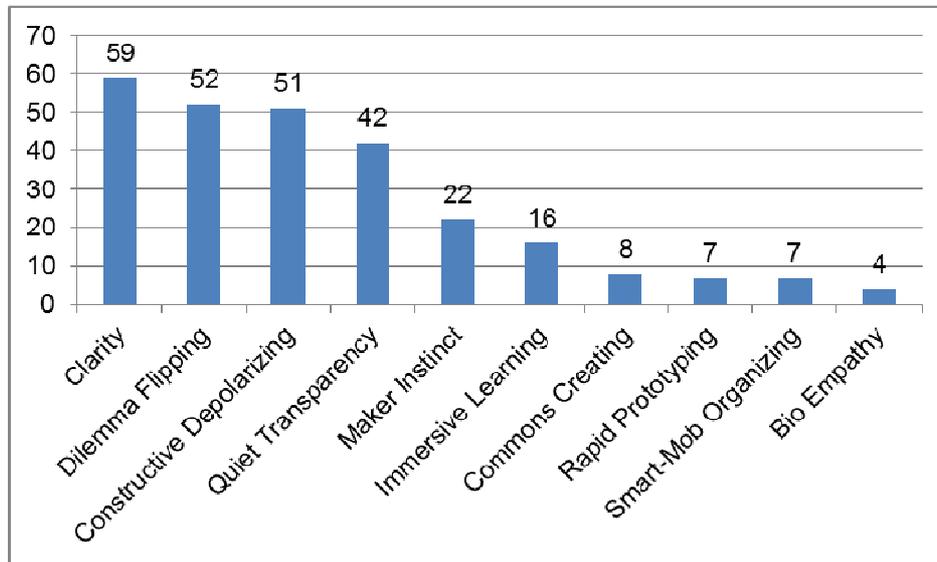


Figure 4.3 Perceived Importance of Skills Relative to Each Other; Immediate Pressing Problems

Research Question 3

Is there a significant difference between industry demographics and perceived importance of each skill?

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of each of the 10 leadership skills for addressing both strategic priorities and immediate pressing problems. Results for all tests proved statistically insignificant as detailed below.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Maker Instinct for addressing strategic priorities. The test was not

significant $X^2(3, N = 65) = .59, p = .90$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Maker Instinct for addressing immediate pressing problems. The test was not significant $X^2(3, N = 63) = 4.05, p = .26$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Clarity for addressing strategic priorities. The test was not significant $X^2(3, N = 65) = .62, p = .89$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Clarity for addressing immediate pressing problems. The test was not significant $X^2(3, N = 63) = 5.97, p = .11$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Immersive Learning for addressing strategic priorities. The test was not significant $X^2(3, N = 65) = 4.9, p = .18$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Immersive Learning for addressing immediate pressing problems. The test was not significant $X^2(3, N = 62) = 2.87, p = .41$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Dilemma Flipping for addressing strategic priorities. The test was not significant $X^2(3, N = 66) = 2.2, p = .53$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Dilemma Flipping for addressing immediate pressing problems. The test was not significant $X^2(3, N = 63) = .75, p = .86$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Bio-Empathy for addressing strategic priorities. The test was not significant $X^2(3, N = 65) = 5.3, p = .15$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Bio-Empathy for addressing immediate pressing problems. The test

was not significant $X^2(3, N = 62) = 1.73, p = .63$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Constructive Depolarizing for addressing strategic priorities. The test was not significant $X^2(3, N = 66) = 3.6, p = .31$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Constructive Depolarizing for addressing immediate pressing problems. The test was not significant $X^2(3, N = 62) = 3.2, p = .36$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Quiet Transparency for addressing strategic priorities. The test was not significant $X^2(3, N = 65) = 3.2, p = .36$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Quiet Transparency for addressing immediate pressing problems. The test was not significant $X^2(3, N = 62) = 7.5, p = .86$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Rapid Prototyping for addressing strategic priorities. The test was not significant $X^2(3, N = 65) = 3.9, p = .28$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Rapid Prototyping for addressing immediate pressing problems. The test was not significant $X^2(3, N = 61) = 3.2, p = .36$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Smart-Mob Organizing for addressing strategic priorities. The test was not significant $X^2(3, N = 66) = .97, p = .81$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Smart-Mob Organizing for addressing immediate pressing problems. The test was not significant $X^2(3, N = 62) = 2.2, p = .53$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Commons Creating for addressing strategic priorities. The test was

not significant $X^2(3, N = 64) = 1.59, p = .66$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the four industry categories (Industrial, Financial Services, Human Services, All Other Companies) on perceived importance of Commons Creating for addressing immediate pressing problems. The test was not significant $X^2(3, N = 63) = 2.88, p = .41$ so pairwise comparisons among the four groups were not conducted.

Although inferential statistics showed no statistical difference, descriptive analysis revealed differences between the four industry categories. Table 4.14 reflects means and standard deviations by industry type for the perceived importance of strategic priorities, and Table 4.15 reflects means and standard deviations by industry type for the perceived importance of immediate pressing problems.

Table 4.14

Perceived Importance for Strategic Priorities by Industry Type

Skills	Industrial		Financial Services		Human Services		All Other Companies	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Maker Instinct	3.25	.754	2.96	.999	3.00	1.275	3.00	1.044
Clarity	3.58	.515	3.42	.717	3.47	.717	3.25	.965
Dilemma Flipping	3.50	.522	3.16	.688	3.12	.781	3.17	.835
Immersive Learning	3.08	.669	2.46	.932	2.88	.993	3.00	1.044
Bio-Empathy	2.25	.866	1.83	.702	2.29	.985	2.50	.905
Constructive Depolarizing	3.00	1.128	3.00	1.000	2.41	1.064	2.92	1.165
Quiet Transparency	3.42	.515	3.63	.647	3.35	.931	3.25	.754
Rapid Prototyping	2.87	1.073	2.71	1.160	2.47	1.068	3.25	.965
Smart-Mob Organizing	2.75	.965	2.84	.943	3.06	.966	2.92	1.165
Commons Creating	2.75	.866	2.50	1.063	2.38	1.258	2.83	1.267

Note: Scale, 1=Not important, 2=somewhat important, 3=important, 4=very important

Table 4.15

Perceived Importance for Immediate Pressing Problems by Industry Type

Skills	Industrial		Financial Services		Human Services		All Other Companies	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Maker Instinct	2.91	.831	2.35	1.152	2.00	1.118	2.33	1.371
Clarity	3.45	.522	3.61	.499	3.71	.470	3.92	.289
Dilemma Flipping	3.36	.505	3.35	.714	3.53	.514	3.42	.669
Immersive Learning	2.91	.701	2.50	1.058	2.94	1.144	3.00	.953
Bio-Empathy	2.09	.701	1.73	.631	1.94	.966	2.08	1.165
Constructive Depolarizing	3.27	1.009	3.68	.568	3.47	.800	3.83	.389
Quiet Transparency	3.55	.522	3.59	.503	3.47	.717	3.33	.778
Rapid Prototyping	2.27	.905	2.19	1.209	1.65	.702	1.92	1.084
Smart-Mob Organizing	2.36	1.120	1.95	.950	1.76	.970	2.08	1.240
Commons Creating	2.45	.934	2.22	1.166	1.82	1.015	2.33	1.231

Note: Scale, 1=Not important, 2=somewhat important, 3=important, 4=very important

Research Question 4

Is there a significant difference between organization size and perceived importance of each skill?

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of each of the 10 leadership skills for addressing strategic priorities and immediate pressing problems. Results for all tests proved statistically insignificant as detailed below.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Maker Instinct for addressing strategic priorities. The test was not significant $X^2(6, N = 66) = 7.53, p = .27$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Maker Instinct for addressing immediate pressing problems. The test was not significant $X^2(6, N = 64) = 12.43, p = .05$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Clarity for addressing strategic priorities. The test was not significant $X^2(6, N = 66) = 4.12, p = .66$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Clarity for addressing immediate pressing problems. The test was not significant $X^2(6, N = 64) = 4.13, p = .66$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Dilemma Flipping for addressing strategic priorities. The test was not significant $X^2(6, N = 67) = 1.08, p = .98$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Dilemma Flipping for addressing immediate pressing problems. The test was not significant $X^2(6, N = 64) = 1.76, p = .94$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Immersive Learning for addressing strategic priorities. The test was not significant $X^2(6, N = 66) = 3.74, p = .71$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Immersive Learning for addressing immediate pressing

problems. The test was not significant $X^2(6, N = 63) = 8.67, p = .19$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Bio-Empathy for addressing strategic priorities. The test was not significant $X^2(6, N = 66) = 3.14, p = .79$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Bio-Empathy for addressing immediate pressing problems. The test was not significant $X^2(6, N = 63) = 4.3, p = .64$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Constructive Depolarizing for addressing strategic priorities. The test was not significant $X^2(6, N = 67) = 2.84, p = .83$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Constructive Depolarizing for addressing immediate pressing problems. The test was not significant $X^2(6, N = 63) = 5.78, p = .45$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Quiet Transparency for addressing strategic priorities. The test was not significant $X^2(6, N = 66) = 3.45, p = .75$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Quiet Transparency for addressing immediate pressing problems. The test was not significant $X^2(6, N = 63) = 1.36, p = .97$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Rapid Prototyping for addressing strategic priorities. The test was not significant $X^2(6, N = 66) = 3.77, p = .71$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Rapid Prototyping for addressing immediate pressing problems. The test was not significant $X^2(6, N = 62) = 10.17, p = .12$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Smart-Mob Organizing for addressing strategic

priorities. The test was not significant $X^2(6, N = 67) = 3.6, p = .73$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Smart-Mob Organizing for addressing immediate pressing problems. The test was not significant $X^2(6, N = 63) = 11.14, p = .08$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Commons Creating for addressing strategic priorities. The test was not significant $X^2(6, N = 65) = 6.94, p = .33$ so pairwise comparisons among the four groups were not conducted.

A Kruskal-Wallis non-parametric test was conducted to evaluate differences among the three organization size categories (fewer than 50 employees, 50-499 employees, and 500+ employees) on perceived importance of Commons Creating for addressing immediate pressing problems. The test was not significant $X^2(6, N = 64) = 5.96, p = .43$ so pairwise comparisons among the four groups were not conducted.

Although inferential statistics showed no statistical difference, descriptive analysis revealed differences between organization sizes. Table 4.16 reflects means and standard deviations by organization size for the perceived importance of strategic priorities, and Table 4.17 reflects means and standard deviations by organization size for the perceived importance of immediate pressing problems.

Table 4.16

Perceived Importance for Strategic Priorities by Organization Size

Skills	< 50 Employees		50 to 499		500 or >	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Maker Instinct	3.33	.877	2.92	1.129	2.62	.961
Clarity	3.48	.643	3.35	.797	3.54	.776
Dilemma Flipping	3.29	.713	3.15	.675	3.15	.801
Immersive Learning	2.70	.953	2.81	.939	2.92	.954
Bio-Empathy	2.21	.787	2.08	.954	2.15	.899
Constructive Depolarizing	3.00	1.089	2.69	1.050	2.85	1.144
Quiet Transparency	3.59	.572	3.35	.797	3.38	.870
Rapid Prototyping	2.54	1.105	2.76	1.091	3.08	1.038
Smart-Mob Organizing	2.96	.962	2.69	1.050	3.15	.801
Commons Creating	2.75	1.110	2.71	1.083	1.92	.954

Note: Scale, 1=Not important, 2=somewhat important, 3=important, 4=very important

Table 4.17

Perceived Importance for Immediate Pressing Problems by Organization Size

Skills	< 50 Employees		50 to 499		500 or >	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Maker Instinct	2.46	1.208	2.60	1.080	1.69	.947
Clarity	3.65	.485	3.64	.490	3.77	.439
Dilemma Flipping	3.35	.689	3.44	.507	3.46	.660
Immersive Learning	2.80	.957	3.00	1.080	2.38	.870
Bio-Empathy	2.00	.866	1.92	.954	1.77	.599
Constructive Depolarizing	3.50	.860	3.58	.654	3.77	.439
Quiet Transparency	3.42	.643	3.54	.658	3.62	.506
Rapid Prototyping	1.88	.947	2.24	1.052	1.77	1.013
Smart-Mob Organizing	2.42	1.172	1.79	.833	1.62	.870
Commons Creating	2.23	1.107	2.32	1.069	1.77	1.092

Note: Scale, 1=Not important, 2=somewhat important, 3=important, 4=very important

Research Question 5

What specific challenges and business priorities drive the perceived importance of the skills?

The survey yielded 74 individual responses. Seven priorities emerged from grouping data into common themes.

1. Emphasis on the future and need for innovation
2. The need to balance long-term and short-term priorities
3. Regulations and uncontrollable external factors
4. The pace and complexity of business
5. Business expansion and need for global sensitivity and cultural diversity
6. Nature of specific industries
7. Increased competition

Table 4.18 provides sample responses within each theme. A full list of survey responses is found in Appendix F.

Table 4.18

Challenges and Business Priorities that Drive Perceived Importance of the Skills

Theme	Sample Responses
Emphasis on the future and need for innovation:	Each person needs to act like they are growing or running their own entrepreneurial business Innovation is extremely important in our ability to build greater value for our customers and employees.
The need to balance long-term and short-term priorities:	Leaders must maintain focus on long term goals in the face of short term challenges Business leaders will only have sustained credibility if they are authentic and clear in dealing with pressing problems
Regulations and uncontrollable external factors:	Financial regulations and laws changing often Government and customer regulations Generational demands Making sense of changing and unknown legislative impacts
The pace and complexity of business:	Need to work faster and find new ways of sharing information Leaders need to be better equipped to make decisions faster and respond to situations faster
Business expansion and need for global sensitivity and cultural diversity:	Retention of diverse cultures is a big problem Working with people from around the world requires a heightened sense of cultural diversity
Nature of specific industries:	In our business looking at all problems from nature's point of view is critical to understanding the impact we have How Classroom management has changed The entire industry is changing
Increased competition:	Competition is releasing new products to the market before we can Competition is fierce

Research Question 6

To what extent are the most important skills integrated into leadership development programs?

The three most important skills reported for addressing strategic priorities were Clarity, Dilemma Flipping, and Maker Instinct respectively. The three most important skills reported for addressing immediate pressing problems were Clarity, Dilemma Flipping, and Constructive Depolarizing respectively. Therefore, integration of the Most Important Skills is reported for the four skills: Clarity, Dilemma Flipping, Maker Instinct, and Constructive Depolarizing.

Of the total number of respondents, 49.2% of respondents indicated Clarity is integrated to some extent into current leadership development programs with 11.5% reporting this skill as fully integrated. Of the total number of respondents, 66.7% of respondents indicated Dilemma Flipping is integrated to some extent into current leadership development programs with 11.7% reporting this skill as fully integrated. Of the total number of respondents, 49.2% of respondents indicated Maker Instinct is integrated to some extent into current leadership development programs with 11.5% reporting this skill as fully integrated. Of the total number of respondents, 57.4% of respondents indicated Constructive Depolarizing is integrated to some extent into current leadership development programs with 16.4% reporting this skill as fully integrated. Table 4.19 provides frequency statistics for the level of integration of the four skills reported as most important.

Table 4.19

Frequency Distribution; Integration of Most Important Skills into Current Leadership Development Programs (n=67)

Variable	Frequency	Percent	Valid Percent
Clarity			
Not Integrated	27	40.3	44.3
Somewhat Integrated	17	25.4	27.9
Integrated	12	17.9	19.7
Fully Integrated	5	7.5	8.2
Total	61	91.0	100.0
Missing	6	9.0	
Total	67	100.0	
Dilemma Flipping			
Not Integrated	20	29.9	33.3
Somewhat Integrated	19	28.4	31.7
Integrated	14	20.9	23.3
Fully Integrated	7	10.4	11.7
Total	60	89.6	100.0
Missing	7	10.4	
Total	67	100.0	
Maker Instinct			
Not Integrated	31	46.3	50.8
Somewhat Integrated	12	17.9	19.7
Integrated	11	16.4	18.0
Fully Integrated	7	10.4	11.5
Total	61	91.0	100.0
Missing	6	9.0	
Total	67	100.0	
Constructive Depolarizing			
Not Integrated	26	38.8	42.6
Somewhat Integrated	13	19.4	21.3
Integrated	12	17.9	19.7
Fully Integrated	10	14.9	16.4
Total	61	91.0	100.0
Missing	6	9.0	
Total	67	100.0	

Research Question 7

Does the current extent of integration differ from the expected integration in the future?

Expected integration of the Most Important Skills is reported for the four skills: Clarity, Dilemma Flipping, Maker Instinct, and Constructive Depolarizing.

Of the total number of respondents, 49.2% of respondents indicated Clarity is integrated to some extent into current leadership development programs and 39.0% report the same level of integration expected in the future. Of the total number of respondents, 3.4% plan to have less emphasis on this skill and 57.7% plan for a higher level of integration. Of the total number of respondents, 66.7% of respondents indicated Dilemma Flipping is integrated to some extent into current leadership development programs and 24.1% report the same level of integration expected in the future. Of the total number of respondents, 3.4% plan to have less emphasis on this skill and 72.4% plan for a higher level of integration. Of the total number of respondents, 49.2% of respondents indicated Maker Instinct is integrated to some extent into current leadership development programs and 49.2% report the same level of integration expected in the future. Of the total number of respondents, 3.4% plan to have less emphasis on this skill and 47.4% plan for a higher level of integration. Of the total number of respondents, 57.4% of respondents indicated Constructive Depolarizing is integrated to some extent into current leadership development programs and 32.8% report the same level of integration expected in the future. Of the total number of respondents, 1.7% plan to have less emphasis on this skill and 65.5% plan for a higher level of integration. Table 4.20 provides frequency statistics for the future expected level of integration of the four skills reported as most important.

Table 4.20

Frequency Distribution; Expected Integration of Most Important Skills into Future Leadership Development Programs, (n=67)

Variable	Frequency	Percent	Valid Percent
Clarity			
Less emphasis	2	3.0	3.4
Same amount of emphasis	23	34.3	39.0
More emphasis	28	41.8	47.5
Top priority emphasis	6	9.0	10.2
Total	59	88.1	100.0
Missing	8	11.9	
Total	67	100.0	
Dilemma Flipping			
Less emphasis	2	3.0	3.4
Same amount of emphasis	14	20.9	24.1
More emphasis	32	47.8	55.2
Top priority emphasis	10	14.9	17.2
Total	58	86.6	100.0
Missing	9	13.4	
Total	67	100.0	
Maker Instinct			
Less emphasis	2	3.0	3.4
Same amount of emphasis	29	42.3	49.2
More emphasis	18	26.9	30.5
Top priority emphasis	10	14.9	16.9
Total	59	88.1	100.0
Missing	8	11.9	
Total	67	100.0	
Constructive Depolarizing			
Less emphasis	1	1.5	1.7
Same amount of emphasis	19	28.4	32.8
More emphasis	26	39.8	44.8
Top priority emphasis	12	17.9	20.7
Total	58	86.6	100.0
Missing	9	13.4	
Total	67	100.0	

Summary

This chapter provided results for the data analysis methods described in Chapter 3. Data analyzed in this study were nominal and ordinal data. Assumptions of normality did not apply. Data were analyzed using descriptive and non-parametric statistics. Background characteristics for the survey respondents were presented, and frequency tables and figures were used to support reported results. Four of the 10 leadership skills were reported as most important and to some extent are integrated into current leadership development programs. Descriptive analysis revealed differences between industry demographics and organization size; however, inferential results indicate no significant difference between industry demographics nor organization size and the perceived importance of each skill.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

This chapter begins with a summary of the findings presented in Chapter 4 and then provides a discussion of those results. Conclusions, implications for practice, recommendations for future research, and final thoughts are included.

Summary of Findings

The purpose of this study was to measure to what extent business leaders perceive the 10 new leadership skills as important. Specifically, the study measured perceived importance relative to addressing (a) strategic priorities, and (b) immediate pressing problems. Secondly, this study measured the extent the 10 new leadership skills are currently integrated into leadership development programs and whether the extent of integration differs from the expected integration in the future. A survey was designed and disseminated through the Greater Des Moines Partnership to seek answers to the research questions below.

1. To what extent is each skill perceived as important relative to (a) addressing strategic priorities and (b) addressing immediate pressing problems?
2. Which skills are perceived as most important?
3. Is there a significant difference between industry demographics and perceived importance of each skill?
4. Is there a significant difference between organization size and perceived importance of each skill?
5. What specific challenges and business priorities drive the perceived importance of the skills?

6. To what extent are the most important skills integrated into leadership development programs?
7. Does the current extent of integration differ from the expected integration in the future?

Data analyzed in this study were nominal and ordinal data. Assumptions of normality were tested and did not apply; therefore, data were analyzed and reported using descriptive and non-parametric statistics (Vogt & Johnson, 2011). Of the total number of respondents, 83.6% of survey respondents indicated their workforce is not fully prepared to deal with VUCA conditions. This study yielded specific findings summarized in order of the seven research questions.

1. Results verify all skills are perceived important at some level. The extent to which each skill is perceived as important varies by the skill in context to (a) addressing strategic priorities and (b) addressing immediate pressing problems.
2. Results indicate Clarity and Dilemma Flipping respectively are the two skills perceived as most important for addressing both strategic priorities and immediate pressing problems. Maker Instinct is perceived as the third most important skill for addressing strategic priorities, and Constructive Depolarizing is perceived as the third most important skill for addressing immediate pressing problems. The order of importance for the remaining skills differs based on the context of (a) addressing strategic priorities and (b) addressing immediate pressing problems.
3. Results reveal no significant difference between industry demographics and perceived importance of each skill.
4. Results reveal no significant difference between organization size and perceived importance of each skill.

5. Results suggest seven types of challenges and business priorities dictate the overall perceived importance of the skills.
 - a. Future need for innovation
 - b. Need to balance long-term and short-term priorities
 - c. Regulations and uncontrollable external factors
 - d. Pace and complexity of business
 - e. Business expansion and need for global sensitivity and cultural diversity
 - f. Nature of specific industries
 - g. Increased competition
6. Results show the perceived most important skills are to an extent integrated into leadership development programs. The extent to which each skill is integrated differs by skill, and less than 20% of the respondents indicate any one skill is fully integrated.
7. Results confirm that the current extent of integration compared to the expected integration in the future varies by skill, with the majority of responses revealing the same or more integration in the future.

Discussion of the Results

This study started with the assumption that all 10 leadership skills are important at some level. Results verified this assertion and revealed no significant difference between industry demographics or organization size and perceived importance of each skill. These results may be interpreted in several ways. First, the response rate of this survey was lower than expected so the number of companies represented may not be enough to be conclusive. Secondly, the skills are not tailored for a particular industry or organization size: disruptive technologies, globalization

and the pending impact of the digital natives in the workforce are relevant to companies across industries and of every size. Lastly, the survey respondents may have ranked certain skills higher or lower due to a lack of understanding of the skills and their application within their organization.

Based on current and expected integration of the 10 leadership skills into formal Leadership Development Programs, executives may not fully understand the implications of not fully preparing their leaders for the VUCA world. Specific to the perceived most important skills of Clarity, Dilemma Flipping, Maker Instinct, and Constructive Depolarizing, these are to some extent integrated into current leadership development programs, and with the exception of Maker Instinct will be even more integrated in the future. These results may be interpreted in several ways. First, as leaders better understand the skills and their practical application within their organization, there is a heightened awareness of how the skills can be used to increase productivity, meet business imperatives, and better manage in the VUCA World. Executives may view these skills as critical to their long-term growth and may want to emphasize them in ways that are new to the organization. Executives may not have thought about these skills as learned abilities before and are now more aware of action that can be taken to improve each skill. Lastly, and specific to Maker Instinct, executives may rethink hiring criteria and may look for natural Makers rather than attempting to develop the Maker Instinct within the current talent pool.

Perceived Importance for Strategic Priorities vs. Immediate Pressing Problems

Of greatest interest is the ranked order of perceived importance of the skills based on context of (a) addressing strategic priorities and (b) addressing immediate pressing problems.

Figure 5.1 outlines all 10 leadership skills in the order Johansen (2009, 2012) presents them and shows this study's ranked order of perceived importance for each skill.

	Order Presented by Johansen (2009, 2012)	Ranked Order for Addressing Strategic Priorities	Ranked Order for Addressing Immediate Pressing Problems
Maker Instinct	1	3	5
Clarity	2	1	1
Dilemma Flipping	3	2	2
Immersive Learning	4	6	6
Bio-Empathy	5	10	10
Constructive Depolarizing	6	5	3
Quiet Transparency	7	4	4
Rapid Prototyping	8	7	8
Smart-Mob Organizing	9	8	9
Commons Creating	10	9	7

Figure 5.1 Perceived Order of Importance for all Skills

Johansen (2009, 2012) shares the 10 leadership skills in a specific order and purports the skills build upon each other in a natural progression starting with Maker Instinct (the ability to exploit your inner drive to build and grow things, as well as connect with others in the making) and concluding with Commons Creating (ability to nurture and grow shared assets that can benefit other players bringing competition to a higher level). Johansen argues that although the skills can stand alone, without the foundation of Maker Instinct and Clarity, the other skills are not likely to develop.

It is difficult to separate the skills from one another. The skills are presented in a specific order for a reason. Everything starts with Maker Instinct. If you could only develop one skill, that would be the most important one. The rest of the skills then become more complex in nature. (B. Johansen, personal communication, October 8, 2013).

In contrast to Johansen's claim, this study revealed that Maker Instinct was not perceived as the most important skill. It was ranked as the third most important skill for addressing strategic priorities and ranked as the fifth most important skill for addressing immediate pressing problems. This ranking appears to be incongruent with the results outlining the need for innovation as one of the seven types of business priorities that dictate the overall perceived importance of the skills and raises the question of whether or not the executive level leader truly understands the skills needed to meet the priorities of the future.

Clarity (the ability to see through contradictions to a future that others cannot yet see) and Dilemma Flipping (the ability to turn dilemmas—which, unlike problems, cannot be solved—into advantages and opportunities) respectively were perceived as the most important skills for addressing strategic priorities and for addressing immediate pressing problems. This ranking is supported by the stated types of challenges and business priorities that dictate the overall perceived importance of the skills and is consistent with current literature linking concepts of clarity and creativity to leaders' ability to make choices and decisions in today's unstable work environment (Johansen, 2007; Pietersen, 2010; Prahalad & Ramaswamy, 2004a). Clarity, cited as one of five major needs of future leaders (Pietersen, 2010), allows leaders to see through contradictions, communicate clearly about unclear conditions, and balance long- and short-term implications of decisions. "Without clarity, leadership ceases to exist." (C. Wimer, personal communication, April 5, 2013). Although Clarity does not represent a new leadership skill, Johansen (personal communication, October 8, 2013) shares:

Clarity today and in the future will be more difficult to achieve than in the past. Everything is so muddy. It is difficult yet necessary to be clear in the VUCA world so it makes sense that Clarity could rank highest in importance. Another

reason to consider is the word [clarity] itself is not a new skill so most executives have an easy time understanding what it means.

What comes as a surprise is the low ranking of the perceived importance of Immersive Learning. Johansen (2009, 2012) lists Immersive Learning (the ability to immerse yourself in unfamiliar environments, to learn from them in a first-person way) as the fourth skill in the progression and provides numerous examples of learning experiences that support the importance of this skill. Examples provided by Johansen (2009, 2010, 2012) and CCL (2012) illustrate the value of Immersive Learning in urgent situations such as responding in combat and in-the-moment flight anomalies as well as in strategic situations such as expansion plans, global impact, and recruitment strategies. There is also an abundance of literature that asserts 21st Century leaders must be learning leaders and find new ways of learning (CCL, 2011; Collins & Hansen, 2011; Davies, et al. 2011; Horney, et. al, 2010; Johansen, 2007, 2009, 2012; Senge, 1990; Zenger & Folkman, 2002). Commitment to learning is further emphasized by Sanaghan and Jurow (2011) when discussing VUCA's impact on how institutions of higher education need to prepare leaders for the future and by others (CCL, 2011; Johansen, 2010, Leslie, 2009) when describing how organizations can create competitive advantage by creating learning environments for developing aptitude for dealing with VUCA conditions.

In contrast to the importance placed on Immersive Learning in the literature, this study ranks Immersive Learning as the sixth most important skill for both addressing strategic priorities and immediate pressing problems, and less than 7% of respondents cited this skill as a top priority for future leadership development programs. One explanation for this dichotomy may be the available technology within the survey respondent organizations and a lack of understanding related to the vast range of immersive learning experiences. Although not all

companies have the technology to participate in online simulations, alternate-reality games, digital scenarios, and 3-D environments, Immersive Learning experiences are not all technology driven. Mentoring, reverse mentoring, theatrical improvisation, and case studies are all examples of strategies that do not rely on technology. Results of this study raise the question of how aware executive level leaders are about the value of Immersive Learning and available learning resources.

Like Immersive Learning, Bio-empathy is also ranked lower than expected. Johansen lists Bio-Empathy (the ability to see things from nature's point of view) as the fifth skill in progression, yet results from this study rank the skill last in importance for both strategic priorities and immediate pressing problems. Results of this study do not align with existing knowledge of the importance of adaptability. Organizations of the future require leaders who adapt quickly in shorter time frames than ever before (Hesselbein & Goldsmith, 2009; Johansen, 2007, 2009; Prahalad & Hamel, 1994a; Prewitt, Weil, & McClure, 2011) and in order to hone skills of adaptation, recognizing and learning from the patterns of nature are important (Johansen, 2010). It appears this skill is not clearly understood or supported by executive leaders. Johansen shares it is one of the most difficult skills to understand. "Unless you are in a biological or agricultural type business, Bio-empathy may not be something that is easy to relate to (B. Johansen, personal communication, October 8, 2013).

Interestingly, the skill that stood out as being perceived as more helpful for addressing immediate pressing problems than for addressing strategic priorities was Constructive Depolarizing. Although listed as the sixth skill in progression by Johansen (2012), Constructive Depolarizing (the ability to calm tense situations where differences are prominent and communication has broken down) ranked as the third most important skill for addressing

immediate pressing problems and had only one less response that the perceived second most important skill. One interpretation of these results has to do with the stress associated with urgent or immediate pressing issues. Excluding emergency situations such as evacuations and health-related matters, examples of immediate pressing problems within organizations include breakdowns in decision making, political posturing, territorial issues, and customer demands. As organizations become more global, diversity dynamics, both internal and external, play a key role in communication breakdown. Constructive Depolarizing is the ability to calm tense situations where differences are prominent and communication has broken down. Johansen (2012) describes Constructive Depolarizing as “the maker instinct applied to conflict” and “the ability to offer consideration and respect whether or not a person deserves it” (p. 113). A leader’s ability to make calm under polarizing conditions is essential for effectively dealing with stressful situations. As global teams become more prominent in organizations today, breakdowns in communication are expected to increase (ASTD, 2012), so another interpretation of the results is that the skill of Constructive Depolarizing would be viewed as a valuable communication skill that is necessary during specific times of stress but that as relationships grow, a leader’s need to use Constructive Depolarizing is limited to urgent matters.

Application for Practitioners

This study revealed executives intend to place more focus on all 10 leadership skills by further incorporating them into future leadership development plans. Of the total respondents, 47.5% of respondents indicated they will place more emphasis on Clarity, and 55.2 % of respondents indicated they will place more emphasis on Dilemma Flipping, the two skills respectively perceived as most important for addressing both strategic priorities and immediate pressing problems. Additionally 10.2% indicated Clarity as a top priority in the future and

17.2% indicated Dilemma Flipping as a top priority in the future. Figure 5.2 illustrates the planned integration of all 10 leadership skills into future leadership development programs. Skills are listed from bottom to top in the order Johansen (2009, 20012) presents them.

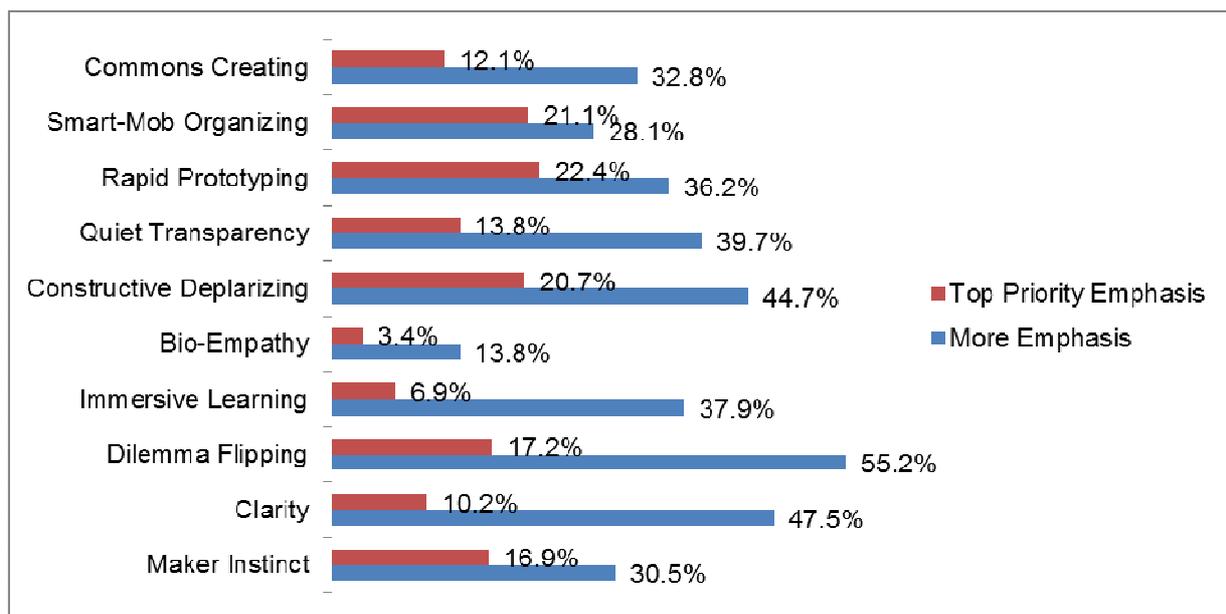


Figure 5.2 Future Integration of Skills into Leadership Development Programs

These results imply opportunities for the Workplace Learning and Development Industry. With the exception of a personal reflection assessment (Johansen, 2012) in the form of a list of questions designed to provoke self-awareness of the skills, currently there are no existing formal evaluative tools to help individuals self-assess their understanding and effective use of the 10 leadership skills. There are no known application-based tools to help leaders create strategies for how to integrate the most important skills into their everyday routine. And, although Johansen (2012) provides examples of actions a person might take to begin practicing the skills, there are no existing commercially-available training courses designed specifically to address these 10

leadership skills. Given the lack of existing resources, leadership development practitioners and specifically professionals within the Workplace Learning and Development industry may advance these skills, and their own businesses, by creating workshops, self-paced online learning tools, interactive social learning, and mobile learning applications. Specific areas of interest, to align with leadership development programs addressed in this survey, include onboarding efforts, executive coaching, career planning, leadership training, and succession planning.

Conclusions

The following conclusions were derived from the study.

1. Today's leaders are not fully prepared for the pervasive challenges of the VUCA world.
2. The leadership skills required for the VUCA world span all industries and sizes of organizations.
3. Contrary to the progression of skills presented by Johansen (2009, 2012), the importance of each skill is not necessarily dependent on a preceding skill, and the importance varies based on whether the skill is being used to address a strategic priority or an immediate pressing problem.
4. Integration of the 10 leadership skills into formal leadership development programs currently varies with the same or more integration expected in the future.

Implications for Practice

In an environment defined by its volatility, uncertainty, complexity and ambiguity, organizations require leaders with skill sets that are fully equipped to effectively navigate rapid change and to cope with the magnitude and intensity of leadership challenges. The need to apply

leadership skills in distinct situations—addressing strategic priorities and addressing immediate pressing problems—coupled with the future planned integration of these skills opens an opportunity to design and commercialize training and tools that maximize leaders’ capabilities to elevate their competitive advantage. Organizations committed to creating up-to-date leadership resources should find it a profitable investment to advance these skills. This will require organizations to continue to invest in their employees. Outlook indicators for the learning industry are trending positive in the areas of new content development and availability of budgets for workplace learning (ASTD, 2013a, 2013b). The implications of this study suggest that substantial allocations in elevating the ten new leadership skills will be money well spent.

Recommendations for Future Research

There are a number of possible avenues for future study. Following is a list of suggestions in the hope that future investigators might consider them as ways to advance the knowledge of how the skills studied are or are not important for the future.

1. Repeating this study, with a larger sample size, is required to test whether perceptions vary between industries and organizations of different size.
2. Testing perceptions in a larger market or a specific industry.
3. Qualitative interviews or focus groups with executive leaders to learn more about what is understood about the VUCA landscape and how they are preparing their leaders to lead.
4. Studying the perceptions of individual contributors (instead of executive leaders).
5. Studying the perceptions of executives within the Workplace Learning & Development industry and their response to these skills.

6. Testing the practicality of the actions suggested by Johansen (2012) to take to improve or advance each skill.
7. Qualitative interviews with HR executives to learn how they are or are not incorporating the skills into leadership development programs.
8. Testing the usefulness of each skill against the seven categories of challenges and business priorities that drive the perceived importance of the skills.
9. Studying the challenges and business priorities that drive the importance of the skills by separating out drivers for addressing strategic priorities and drivers for addressing immediate pressing problems.
10. Studying the mindsets, behaviors and supporting skills that allow leaders to advance in their knowledge of and use of the 10 leadership skills.
11. Conducting a case study to learn how a specific organization has integrated the skills into leadership development programs.
12. Conducting an evaluative study of existing leadership development programs (commercialized or proprietary) to understand how the skills are or are not integrated.

Final Thoughts

In support of this research, Johansen acknowledged the importance of continued study and provided the following research endorsement:

This is a time when organizations need to re-think leadership skills—given the external future forces of the next decade. While enduring skills will continue to be important, there will be new pressures and new needs. Clarity, for example, has always been important for leaders—but it has never been so difficult as in the

VUCA World. Problem-solving will continue to be important, but top leaders will be faced with dilemmas they cannot solve but they will need to win anyway. Laura Bernstein's thoughtful work helps to explore this territory more deeply. (personal communication, January 4, 2014)

It is likely that some traditional leadership skills will soon be obsolete or at best foundational only. Johansen (2007, 2009, 2011, 2012) has done incredible work laying the foundation for skills needed for the future; however, developing skills is something each leader must commit to him or herself in order to help shape the future. The hope of this study was to inform future leadership development efforts so that we do not waste important time when there are skills we can develop starting today. It is incumbent upon all leaders committed to a successful future to learn the 10 future leadership skills. "With new skills tuned to external future forces, leaders can make better organizations, better communities, and a better world" (Johansen, 2010). Recognizing we live in a VUCA world, one that is characterized by volatility, uncertainty, complexity, and ambiguity, and acknowledging that new skills are needed, is the first step.

APPENDIX A
ESSENTIAL WORKPLACE SKILLS

The essential workplace skills listed on the next page were compiled in a report related to SCANS Competencies and Foundation Skills under the direction of the U.S. Department of Labor, Employment and Training Administration, and the U.S. Department of Education's National Center for Education Statistics. This report documents "the skills and behaviors that have been identified as essential for a workforce facing the challenges of global competition in an environment of rapidly changing markets" (ACT Inc.-Workforce Development Division, 2000, p. xiii). Detailed information about each of these essential skills can be found on pages 9 – 248 of the report.

Essential Workplace Skills

Workplace Competencies	Foundation Skills
<p>Resources Allocates Time Allocates Money Allocates Materials and Facility Resources Allocates Human Resources</p> <p>Information Acquires and Evaluates Information Organizes and Maintains Information Interprets and Communicates Information Uses Computers to Process Information</p> <p>Interpersonal Participates as a Member of a Team Teaches Others Serves Clients/Customers Exercises Leadership Negotiates to Arrive at a Decision Works with Cultural Diversity</p> <p>Systems Understands Systems Monitors and Corrects Performance Improves and Designs Systems</p> <p>Technology Selects Technology Applies Technology to Task Maintains and Troubleshoots Technology</p>	<p>Basic Skills Reading Writing Arithmetic Mathematics Listening Speaking</p> <p>Thinking Skills Creative Thinking Decision Making Problem Solving Seeing Things in the Mind's Eye Knowing How to Learn Reasoning</p> <p>Personal Qualities Responsibility Self-Esteem Social Self-Management Integrity/Honesty</p>

APPENDIX B

EXAMPLE LEADERSHIP COMPETENCIES

The Society for Human Resource Management (2008) defines leadership competencies as “leadership skills and behaviors that contribute to superior performance (para 1) and emphasizes organizations can make informed decisions about hiring, developing and promoting leaders by assessing and addressing leadership competency gaps. The following leadership competencies (McCauley, 2006) have been identified as core competencies for leaders regardless of industry or level of leadership; the global leadership competencies (McCall & Hollenbeck, 2002) are needed for leaders faced with the challenges of leading globally diverse teams.

CORE LEADERSHIP COMPETENCIES	GLOBAL LEADERSHIP COMPETENCIES
<p>Leading the organization</p> <ul style="list-style-type: none"> • Managing change • Solving problems and making decisions • Managing politics and influencing others • Taking risks and innovating • Setting vision and strategy • Managing the work • Enhancing business skills and knowledge • Understanding and navigating the organization <p>Leading the self</p> <ul style="list-style-type: none"> • Demonstrating ethics and integrity • Displaying drive and purpose • Exhibiting leadership stature • Increasing your capacity to learn • Managing yourself • Increasing self-awareness • Developing adaptability <p>Leading others</p> <ul style="list-style-type: none"> • Communicating effectively • Developing others • Valuing diversity and difference • Building and maintaining relationships • Managing effective teams and work groups 	<ul style="list-style-type: none"> • Open-minded and flexible in thought and tactics • Cultural interest and sensitivity • Able to deal with complexity • Resilient, resourceful, optimistic and energetic • Honesty and integrity • Stable personal life • Value-added technical or business skills

APPENDIX C

INDUSTRY CODES

Although the North American Industry Classification System (NAICS) is currently used by business and government in the United States, Canada, and Mexico as the standard to classify organizations according to type of economic activity (“NAICS,” n.d.), this study used categories provided by the Greater Des Moines Partnership, representative of the Midwest market.

The survey allowed respondents to select from subcategories within the following list of industries. During analysis, the industry categories were grouped into the four categories of Industrial, Financial, Human Services, and All Other Industries.

- Industrial, Manufacturing & Engineering Systems
- Business, Marketing & Management
- Financial Services
- Human Services & Resources
- Communication & Information Systems
- Health Sciences
- Environmental & Agriculture Systems
- Energy

APPENDIX D
SURVEY ELECTRONIC COVER LETTER

June 17, 2013

Dear Greater Des Moines Partnership Business Member,

As a key executive in your organization, you are invited to participate in an important study highlighting 10 leadership skills. The purpose of this study is to measure to what extent you perceive these 10 skills as important relative to your leaders' ability to address (a) strategic priorities, and (b) immediate pressing problems. This study will also measure the extent the skills are integrated into your organization's current leadership development programs.

Please know this survey:

- is designed to take no more than 15 minutes of your time
- provides you an opportunity to be a participant in landmark research for our community
- is anonymous so you will not be required to provide personal information such as name, social security number or specific place of employment
- is sponsored by the Greater Des Moines Partnership Workforce Development Department
- is being initiated and used as the foundation for my doctoral research in the area of leadership at Drake University

A summary of results will be provided to all Greater Des Moines Partnership chamber members at the conclusion of the study.

Thank you in advance for your time and participation.

Please click on the link below to begin the survey. Your participation is voluntary. You may exit the survey and discontinue your participation at any time. The survey will be active until July 10, 2013. Should you have any questions, please contact me at 515-205-7001 or laura.bernstein@drake.edu.

Sincerely,

Laura E. Bernstein
Doctoral Candidate
School of Education

APPENDIX E
QUALTRICS SURVEY QUESTIONNAIRE

THANK YOU FOR PARTICIPATING IN THIS IMPORTANT SURVEY! THE TOTAL SURVEY SHOULD TAKE LESS THAN 20 MINUTES OF YOUR TIME.

The industry that best describes my organization is

- Manufacturing (1)
- Transportation, Distribution, and Logistics (2)
- Science, Technology, engineering, and Mathematics (3)
- Architecture and Construction (4)
- Other (5) _____
- Marketing (6)
- Business Management and Administration (7)
- Hospitality and Tourism (8)
- Banking (9)
- Insurance (10)
- Real Estate (11)
- Other (12) _____
- Human Services (13)
- Law, Public Safety, Corrections and Security (14)
- Government and Public Administration (15)
- Education and Training (16)
- Other (17) _____
- A/V Technology and Communications (18)
- Information Technology (19)
- Creative Services, Arts (20)
- Other (21) _____
- Health Care/Medical (22)
- Research/Development/Manufacturing (23)
- Wellness (24)
- Other (25) _____
- Agriculture and Food (26)
- Natural Resources (27)
- Other (28) _____
- Utilities (29)
- Alternative Energy Solutions (30)
- Other (31) _____

What is the status of your company?

- Private For Profit (1)
- Private Nonprofit (2)
- Public (3)

How many employees do you have in the greater Des Moines area?

- Fewer than 10 (1)
- 10 - 49 (2)
- 50 - 99 (3)
- 100 - 249 (4)
- 250 - 499 (5)
- 500 - 999 (6)
- 1000 - 4999 (7)
- 5000 or more (8)

I am

- Male (1)
- Female (2)

The rest of this survey looks at 10 leadership skills for 21st century leaders. It is designed to measure to what extent you perceive each of the skills as important relative to addressing (a) strategic priorities and (b) immediate pressing problems. It also measures to what extent you are incorporating these skills into your organization's leadership development programs. In all cases, when this survey refers to leaders, the definition of "leaders" is people within your organization that have formal leadership and managerial responsibility. Should you have any questions while taking the survey, please do not hesitate to contact Laura Bernstein at laura.bernstein@drake.edu.

How prepared are your leaders to deal with today's VUCA (volatile, uncertain, complex and ambiguous) business environment?

- Not prepared (1)
- Somewhat prepared (3)
- Fully prepared (4)

innovations) (8) SMART-MOB ORGANIZING (use current media to create & engage change networks) (9) COMMONS CREATING (grow shared assets that benefit others & heightens competition) (10)	<input type="radio"/>							
	<input type="radio"/>							

Most important skills for addressing STRATEGIC PRIORITIES: Check the 4 skills that are most important for your leaders.

- MAKER INSTINCT (exploit inner drive to build and grow things) (1)
- CLARITY (make sense of clutter) (2)
- DILEMMA FLIPPING (turn dilemmas into advantages) (3)
- IMMERSIVE LEARNING (learn from unfamiliar environments in 1st-person way) (4)
- BIO-EMPATHY (see & learn things from nature's point of view) (5)
- CONSTRUCTIVE DEPolarIZING (calm tense situations & facilitate constructive engagement) (6)
- QUIET TRANSPARENCY (be open & authentic) (7)
- RAPID PROTOTYPING (quickly create early versions of innovations) (8)
- SMART-MOB ORGANIZING (use current media to create & engage change networks) (9)
- COMMONS CREATING (grow shared assets that benefit others & heightens competition) (10)

Most important skills for addressing IMMEDIATE PRESSING PROBLEMS: Check the 4 skills that are most important for your leaders.

- MAKER INSTINCT (exploit inner drive to build and grow things) (1)
- CLARITY (make sense of clutter) (2)
- DILEMMA FLIPPING (turn dilemmas into advantages) (3)
- IMMERSIVE LEARNING (learn from unfamiliar environments in 1st-person way) (4)
- BIO-EMPATHY (see & learn things from nature's point of view) (5)
- CONSTRUCTIVE DEPolarIZING (calm tense situations & facilitate constructive engagement) (6)
- QUIET TRANSPARENCY (be open & authentic) (7)
- RAPID PROTOTYPING (quickly create early versions of innovations) (8)
- SMART-MOB ORGANIZING (use current media to create & engage change networks) (9)
- COMMONS CREATING (grow shared assets that benefit others & heightens competition) (10)

For the skills you selected as most important (for both strategic priorities & immediate pressing problems), please share 2 or 3 specific challenges, business priorities or types of circumstances that drive why these skills are important to you and your leaders.

Leadership Development Venues: What type of organization-sponsored learning & development activities do you offer within your organization? [check all that apply]

- Do not offer any type of learning & development activities (1)
- New Leader On-boarding/Orientation (2)
- Executive Coaching and/or Mentoring (3)
- Career Planning (4)
- Formal Leadership Training (instructor-led) (5)
- Formal Leadership Training (self-paced e-learning) (6)
- Formal Leadership Training (technology-enhanced group training, e.g. webinars, virtual classrooms) (7)
- Informal Leadership Training (e.g. lunch-n-learns, book clubs) (8)
- Succession Planning (including special work assignments) (9)
- Other (10) _____

Current Learning & Development Activities: For each skill, indicate the extent to which this skill is currently incorporated into existing organization-sponsored leadership development activities.

	NOT INTEGRATED (this skill is not part of any official development activity) (1)	SOMEWHAT INTEGRATED (this skill is part of a few L&D activities) (2)	INTEGRATED (this skill is part of several L&D activities) (3)	FULLY INTEGRATED (this skill is emphasized in most of our L&D activities) (4)
MAKER INSTINCT (exploit inner drive to build and grow things) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CLARITY (make sense of clutter) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DILEMMA FLIPPING (turn dilemmas into advantages) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IMMERSIVE LEARNING (learn from unfamiliar environments in 1st-person way) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BIO-EMPATHY (see & learn things from nature's point of view) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CONSTRUCTIVE DEPOLARIZING (calm tense situations & facilitate constructive engagement) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
QUIET TRANSPARENCY (be open & authentic) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RAPID PROTOTYPING	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>(quickly create early versions of innovations) (8)</p> <p>SMART-MOB ORGANIZING (use current media to create & engage change networks) (9)</p> <p>COMMONS CREATING (grow shared assets that benefit others & heightens competition) (10)</p>	○	○	○	○
	○	○	○	○

Future Leadership Development Programs: For each skill, indicate the priority you anticipate giving to incorporating it into future learning & development activities.

	Less emphasis in the future (1)	Same amount of emphasis in the future (2)	More emphasis in the future (3)	Top priority emphasis in the future (4)
MAKER INSTINCT (exploit inner drive to build and grow things) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CLARITY (make sense of clutter) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DILEMMA FLIPPING (turn dilemmas into advantages) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IMMERSIVE LEARNING (learn from unfamiliar environments in 1st-person way) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BIO-EMPATHY (see & learn things from nature's point of view) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CONSTRUCTIVE DEPOLARIZING (calm tense situations & facilitate constructive engagement) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
QUIET TRANSPARENCY (be open & authentic) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RAPID PROTOTYPING (quickly create early versions of innovations) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SMART-MOB ORGANIZING	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>(use current media to create & engage change networks) (9)</p> <p>COMMONS CREATING (grow shared assets that benefit others & heightens competition) (10)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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THE SURVEY IS COMPLETE! PLEASE CLICK ON "NEXT" BUTTON [>>] TO EXIT THE SURVEY. THANK YOU FOR YOUR PARTICIPATION.

APPENDIX F

LIST OF SURVEY RESPONSES CHALLENGES AND BUSINESS PRIORITIES THAT DRIVE PERCEIVED IMPORTANCE OF THE SKILLS

The responses below are grouped into themes that emerged during analyses. Responses shown in italics are highlighted in Chapter 4 by inclusion in Table 4.18 as sample responses.

Theme	Responses
Emphasis on the future and need for innovation:	<ol style="list-style-type: none"> 1. <i>Each person needs to act like they are growing or running their own entrepreneurial business</i> 2. <i>Innovation is extremely important in our ability to build greater value for our customers and employees.</i> 3. For strategic challenges it is important to be future focused 4. Need to interject innovation daily for quick changes 5. Improving engagement of employees so we can be more creative as a company 6. IT is harder to keep up with the innovations needed 7. We must re-invent our company quickly 8. It's all about the next new product 9. We can't rest on past laurels; it's about the future 10. Innovation is a core skill these days
The need to balance long-term and short-term priorities:	<ol style="list-style-type: none"> 11. <i>Leaders must maintain focus on long term goals in the face of short term challenges</i> 12. <i>Business leaders will only have sustained credibility if they are authentic and clear in dealing with pressing problems</i> 13. Short term solutions that do not reflect long term qualities will be just that (short term) 14. Long term success depends on qualities that are most important in times of pressing needs. 15. Leadership must remain calm and foster an environment that can work both on short term and long term priorities 16. Need to think strategically while operating in the "now" 17. Managing change when we're not ready to change yet 18.
Regulations and uncontrollable external factors:	<ol style="list-style-type: none"> 19. <i>Financial regulations and laws changing often</i> 20. <i>Government and customer regulations</i> 21. <i>Generational demands</i> 22. <i>Making sense of changing and unknown legislative impacts</i>

	<ul style="list-style-type: none"> 23. More regulations 24. Impact of severe weather on our business 25. Government regulations are near the breaking point of being too burdensome 26. We spend a lot of time filling binders with documentation which distracts us from serving the customer 27. Public accountability 28. Shareholder demands 29. The landscape is changing and new rules are in place
<p>The pace and complexity of business:</p>	<ul style="list-style-type: none"> 30. <i>Need to work faster and find new ways of sharing information</i> 31. <i>Leaders need to be better equipped to make decisions faster and respond to situations faster</i> 32. Need to always think quick on your feet in our line of work. 33. Being able to turn what could be bad situations around into good outcomes is needed. 34. Need to have a clear head in order to fully understand how to get towards the end result. 35. Business is faster and increasingly complex 36. Our staff needs to learn on the fly and address challenges in an open fashion 37. Inter-dependence on others to do their job correctly 38. Fast pace work environment creates need to clarify challenges while providing a comforting sense of strategy so team remains calm, focused 39. Managing massive change 40. The make-up of our teams 41. Complexity of situations nowadays 42. More pressures than ever before 43. We have a lot to accomplish in the next 5 years (more than ever) 44. Need to think on feet 45. When our leaders work with people they need to think and react fast 46. We need to be more sophisticated in how we deal with issues if we are going to have culturally-diverse people on our team and that's the goal 47. Smart-mob sounds very important in terms of dealing with so many things at once
<p>Business expansion and need for global sensitivity and cultural diversity:</p>	<ul style="list-style-type: none"> 48. <i>Retention of diverse cultures is a big problem</i> 49. <i>Working with people from around the world requires a heightened sense of cultural diversity</i> 50. Business development

	<p>51. Developing business overseas 52. Lots of diversity of people now 53. Must establish business as local experts in the global local market 54. Need to be politically savvy with different people 55. Expanding into new markets demands us to be more clear and have new strategies for working with people 56. Need to lead the way with expanding internationally</p>
Nature of specific industries:	<p>57. <i>In our business looking at all problems from nature's point of view is critical to understanding the impact we have</i> 58. <i>How Classroom management has changed</i> 59. <i>The entire industry is changing</i> 60. One must be creative and listen in my field 61. Classroom management 62. Staying ahead of curve in our industry 63. Meeting educational objectives 64. Industry is changing every day and we need to keep up 65. Keeping up with the new regulations of our industry</p>
Increased competition:	<p>66. <i>Competition is releasing new products to the market before we can</i> 67. Growing customer base and share of customer wallet 68. Creating greater value for service offerings in eye of customers 69. Continue to grow presence in Cedar Rapids/Iowa City Corridor when others are a step ahead 70. Need to fill 80-unit, HUD-assisted elderly and mobility handicapped aging apartment complex with so many new complexes coming into the area that are more attractive to the low-income elderly and mobility handicapped. 71. Must build market share in a highly competitive environment 72. Bring order to chaos by creating a coherent sales plan to combat competition 73. Our competition is marketing to younger people and we need to catch up 74. Competition is fierce</p>

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