2011

A study of the innovation, creativity, and leadership skills associated with the college-level millennial generation

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A STUDY OF THE INNOVATION, CREATIVITY, AND LEADERSHIP SKILLS ASSOCIATED WITH THE COLLEGE-LEVEL MILLENNIAL GENERATION

A dissertation submitted in partial satisfaction

of the requirements for the degree of

Doctor of Education in Organizational Leadership

by

Melinda Lester

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This dissertation, written by

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under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

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Education

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Pepperdine University

Masters of Art – Art with an Emphasis in Graphic Design 1977
California State University, Fullerton

Bachelors of Art – Art with an Emphasis in Graphic Design 1975
California State University, Fullerton

California Community College Instructor Credential 1982–present

Computer training and development – over 200 hours instruction in Macintosh/PC programs including desktop publishing and continuing education credits. 1991–1998

Academic Experience

The Art Institutes – College of Art and Design 2011–present

Senior Director of Institutional Effectiveness
Responsible for institutional planning, evaluation, compliance and curriculum review for the eight Art Institute campuses in California.

The Art Institute of California – Orange County – Santa Ana, CA 2001–2011

Interim College Dean, The Art Institutes (January 2010 – February 2011)
Along with the duties of the Dean of Academic Affairs at the Orange County campus, responsibilities include leading eight campuses into regional accreditation requirements for educational compliance.

Dean of Academic Affairs (October 2006 – February 2011)
Chief academic officer includes responsibilities for operations and departmental processes and procedures, compliance with accreditation agencies, achieving required metrics and maintaining budget requirements. Leadership included oversight of a department of 10 academic chairs, 15 staff and a faculty of over 125 who instruct 2000 students.

Acting Dean of Academic Affairs (February 2006 – October 2006)
Along with the duties of the associate dean, responsibilities of the chief academic officer were included for an interim period.

Associate Dean of Academic Affairs (July 2005 – February 2006)
Responsible for daily operations of the academic affairs department, including academic advising, curriculum development, quarterly course scheduling, interactions with faculty, students and collaborating with all departments of the school.

Academic Department Director – Graphic Design & Advertising (August 2003 – July 2005)
Responsible for running three academic programs that included 30 instructors, 380 students and responsible for delivery of curriculum and outcomes of the graphic design, advertising and foundation studies programs.

Faculty (October 2001 – August 2003)
Classes taught in the graphic design and foundation studies emphasis. Additional duties included academic advising. Courses taught: Typography, Design Layout, Electronic Design, Design Concepts, Media Design, Electronic Production, Corporate Communications, Project Study, and Freshman Seminar

Our Lady of Fatima Catholic School, San Clemente, CA 1997–2002

Art program director – teacher for 5th and 6th grade art classes; curriculum development; purchasing supplies/materials for curriculum support; supervisor of volunteer art teaching staff; and organized yearly performing arts program.

Brooks College, Long Beach, CA 1996–1999

Instructor – Graphic Design Department, classes include: Graphic Design II, Graphic Design III, and Production II

Golden West College, Huntington Beach, CA 1982–1983

Instructor – Graphic Design Department, classes include: The Portfolio and Introduction to Graphic Design

Industry Experience

Melinda Lester Design – Art Direction and Graphic Design 1987–2005
Owner – Full-service studio providing art direction and design services

Century 21 Real Estate Corporation – Irvine, CA 1993–1994
Graphic Designer/Print Buyer

Foote, Cone & Belding Advertising – Santa Ana, CA 1986–1987
Art Director – Client Mazda Motors of America.

Cochrane Chase, Livingston & Company Advertising – Irvine, CA 1981–1986
Art Director/Designer

Lovenduski, Robertson & Kinsey Advertising – Irvine, CA 1979–1981
Art Director

Boylhart, Lovett & Dean Advertising – Los Angeles, CA 1977–1979
Art Director/Production Studio Manager

Ray Engle & Associates – Los Angeles, CA 1976–1977
Graphic Designer

ABSTRACT

As the economy has become increasingly global, organizations whose employees are more creative and innovative compete at a higher level than those who do not. And, organizations that incorporate multi-generations into their workforce will realize more creativity and innovation within their organizations. Now, and in the future, leaders will encounter a new generation of employees that will challenge their leadership ability. The challenges addressed in this study gravitate to these areas: Creativity and innovative abilities that will compete in the global economy; the Millennial Generation and their unrealized creative skills due to the influence of the *No Child Left Behind Act*, which could cause difficulties in the new Conceptual Age; and workplace and leadership challenges that are associated with the consequences of the generation's perceptions.

The purpose of this quantitative study was to examine creativity and leadership as self-perceived aspects in the college-level Millennial Generation. 2 survey instruments were utilized in this study that generated 106 responses from across the United States and internationally: the Scale of Creativity Attributes and Behavior (SCAB) and the Student Leadership Practices Inventory (SLPI). Results determined the majority of respondents perceived themselves as creative. Overall, creative aspects that rated highest were tolerance and appreciation of new ideas, but skills associated with impulsive and risk-taking behaviors garnered the lowest scores. In traits that impact creativity, females showed more tolerance of others and remained flexible in their thinking while relishing new ideas, and those with a higher level of education also enjoyed working on creative projects and finding solutions to creative problems. For overall leadership self-perceptions, teamwork was highlighted while inspiring others ranked the lowest. Even without significant correlation between creativity and leadership skills, areas of

significance were tolerance of others and the level of education/age showing more ability to inspire others and model desired behaviors.

Conclusions suggest an enhancement in creativity skills, with an emphasis on risk-taking, would enhance the educational experience. Additionally, encouraging partnerships with the business community to cultivate real-world projects where problem-solving and critical thinking abilities were included would upgrade the skill level in employees for the new global economy.

Chapter 1. Overview

Background

Job outsourcing to third-world countries will dramatically change job possibilities for American students/employees in the future. More and more of the jobs that require repetitive or technological tasks that trained workers and aspiring students expected to be available are going overseas (Freidman, 2005). Creativity and ingenuity, skills where Americans have traditionally excelled, will be more important in the future to sustain the economy (Pink, 2005a). However, secondary schools have minimized arts programs in their curriculum, marginalizing critical thinking skills that will be vital for the creative careers of the future.

Since the implementation of the No Child Left Behind Act (NCLB) of 2001, curriculum delivery has been negatively impacted in subjects "including social studies, art and music…" (McMurrer, 2008, p. 1) by reducing class time dedicated to these subject areas to focus on math and English skills. Additionally, Secretary of Education Arne Duncan is concerned about students' ability to develop their talents under a "well-rounded curriculum" (Duncan, 2010, para. 24) including those creativity-based courses being diminished by the focused testing (McMurrer, 2008):

> First, the arts significantly boost student achievement, reduce discipline problems, and increase the odds that students will go on to graduate from college. Second, arts education is essential to stimulating the creativity and innovation that will prove critical to young Americans competing in a global economy. And last, but not least, the arts are valuable for their own sake, and they empower students to create and appreciate aesthetic works. (Duncan, 2010, para. 30)

The Millennial Generation, those born between 1982 and 2004, are the group that will be affected most by this trend (Howe & Strauss, 2003). The job forecast will impact this generation in their future careers. They will need to cope with the skills they have, or they will have to develop new ones. Industry leaders and managers that work with this new generation will need to adapt to the skills or develop skills necessary in their work force to compete in the global economy (Myers & Sadaghiani, 2010; Ng, Schweitzer, & Lyons, 2010; Nicholas, 2008). And the creativity and innovation skills required of the workforce to bolster the economy will fall on the shoulders of the millennials (Pink, 2005a).

Those students who dream of launching a career requiring creativity or innovation will need to be adequately prepared for their new adventures and have an accurate perspective of this new job market. The global aspects this generation embodies are technologically advanced and the members are regularly in touch with each other by their use of the latest media and resources (Meister & Willyerd, 2010; Nicholas, 2008). They will need to use new technologies to enhance their work (Florida, 2005). They will also need to deal with older coworkers that don't have the same skills or knowledge of the technologies (Meister & Willyerd, 2010). Business leaders will need to adapt to work with the traits of not only the Millennial Generation, but how they integrate with the previous generations as well (Meister & Willyerd, 2010; Zemke, Raines & Filipczak, 2000). Leaders will be challenged to enhance the learning and skills necessary for the new workers and will need to find ways to help the multiple generations work together to create a new dynamic in the workforce (Orrell, 2008).

Problem Statement

Now, and in the near future, leaders will encounter a new generation of employees that are going to challenge the leadership abilities of organizations. The traits of the Millennial Generation will challenge the way leaders will incorporate these new employees into their organizations (Orrell, 2008).

The challenges that need to be addressed gravitate to a few areas: Creativity and innovative abilities that will satisfy the needs of the coming age (Pink, 2005a); the Millennial Generation and the concern that unrealized creative skills due to the influence of the No Child Left Behind Act (2001) could cause difficulties in the new Conceptual Age (Chowcat, 2002; Pink, 2005a); and workplace and leadership challenges that might be associated with the consequences of the generation's perceptions (Alsop, 2008; Marston, 2007; Meister & Willyerd, 2010; Rawlings, Indvik & Johnson, 2008).

Creativity. If a focus on strengths includes creativity in the Millennial Generation, a concern is this group does not possess the skills necessary to succeed in a global economy. With a lack of patience (Chester, 2002) and an aversion to taking risks (Howe & Nadler, 2010), the creative problem solving and critical thinking skills essential to define and formulate solutions could be lacking (Heilig, Cole & Aguilar, 2010). A different approach to developing creative problem solving could include a shift to the application of those skills necessary for real-world solutions (Robinson, 2001) to give the students the tools to be better prepared.

"The expanding twenty-first century learning movement is a business-supported educational reform that is strongly focused on creativity and innovation as key components of children's schooling" (Heilig, Cole & Aguilar, 2010, p. 143). Still,

preparing students for the future workplace needs come through creative educational curriculum:

> Through the arts, students can learn teamwork and practice collaborative learning with their peers. They develop skills and judgment they didn't know they had--whether it is drumming in time or acquiring the knowledge to differentiate between Pavarotti and the tenor in the choir loft at the Sunday service. (Duncan, 2010, para. 19)

The integration of all facets of creativity generated in the educational process, as well as in businesses and organizations, is essential to produce a vital student and employee for the future. "A well-educated student, in other words, is exposed to a well-rounded curriculum" (Duncan, 2010, para. 6). The belief that critical thinking skills in arts education are critical to developing citizens who will be globally effective is not new. In his essays on art in education, the philosopher John Dewey (1934) supports this concept, as do more recent theorists (Csikszentmihalyi, 1996; Florida, 2004, 2005, 2010; Heilig, Cole & Aguilar, 2010; Robinson, 2001; Runco, 2007) including the current U.S. Secretary of Education, Arne Duncan (2010). A focus on a more "inter-disciplinary" (Chowcat, 2002, p. 44) method to develop students/graduates equipped with the creative and innovative skills needed for the jobs and challenges in the workforce of the future is required:

> A simple, undeniable first principle is that every single human being is creative. Each and every effort and policy initiative we undertake can be measured by this simple yardstick: how do they increase the ability of people, organizations, places, and companies to mobilize human creative capabilities? No, not all of us can

> paint, write novels, make movies, compose symphonies, develop new software, build new energy-efficient systems, or invent new biotechnologies. But we all have something we're good at, our own creative spark, and there's little in life more satisfying and rewarding than the chance to exercise that talent. The real key to economic growth lies in harnessing the full creative talents of every one of us. (Florida, 2010, p. 182)

The Millennial Generation. Millennials, Generation M, Gen Y, or Echo Boomers, are the names associated with those born in the late Twentieth Century, between 1982 and 2004. This group is not just the latest to be watched and analyzed as they progress into adulthood, but they are causing a great deal of attention as they enter into college and the workforce because of the way they have been brought up. These students have generally grown up in an age of technological breakthroughs, economic freedoms and with overprotective parents (Oblinger & Oblinger, 2005).

Neil Howe and William Strauss (2003), noted generational theorists, have identified "seven core traits of the millennials: They are special, sheltered, confident, team-oriented, conventional, pressured, and achieving" (pp. 51-52). The millennials are demanding their needs be met, sometimes called entitlement, from the organizations they are associated with. Colleges are scrambling with ways to deal with their needs while still motivating them. As these students transition into the workforce, the skills they bring, and the ones they lack, are impacting the older generations, as well, because they have much different approaches to the work environment.

As the generation of millennials pursues higher-level degrees, colleges and university faculty are adjusting the approach they take in millennial classrooms (DeBard,

2004; Wilson, 2004). They don't fit the more traditional mold due to the increasing use of technology that can be a constant stimulant. These students can also be "highly involved and scheduled" (Wilson, 2004, p. 62) with activities that compete with their engagement in the learning process. Studying and attending classes have to fit in to the many other activities and social engagements in which they participate. These students tend to look at education as more of a commodity that can be acquired, not really subscribing to an engagement in the learning process. Traditional methods don't seem to work (Oblinger & Oblinger, 2005).

"Student engagement is the key to academic motivation, persistence, and degree completion" (McGlynn, 2008, p. 20). Student motivation to learn is not the only key to solving the problem. "Reaching these millennial students in order to engage, motivate, and inspire them needs to be addressed so that there can be an intersection between how they learn and how we teach" (McGlynn, 2008, p. 21). A focus on their strengths is the way to motivate the millennial students. Additionally, using discussions, engaging group activities, and experiential learning methods have been reported to engage students in their own learning (Wilson, 2004).

Leadership. Workplace skills will also need to be developed in the new generation of students who will develop into the leaders of tomorrow. Additionally, the current leadership in our organizations will need to understand the needs of this new workforce to integrate them with their current employees (Meister & Willyerd, 2010). Factors that need to be addressed include a changing dynamic in the generational aspects of the workforce, the globalized environment due to the rapidly increase in the uses of technology, an increasing need for knowledge and skills required to address outsourcing

and economical consolidation, and a focus on creativity, diversity, sustainability and corporate social responsibility (IBM Global Business Services, 2010b; Meister & Willyerd, 2010).

The current workforce consists of multiple generations who have very different expectations and motivations on the job. The oldest group, some of who have already retired, is the traditionalists—also called the silent generation—born before 1946 and impacted by World War II and the rise of communism. They share the values of loyalty, sacrifice and have a high regard for authority. The largest of the groups are the baby boomers who grew up in the 1950s, lived through Woodstock, Vietnam, Watergate and the assassination of the Kennedys and Martin Luther King. This generation grew up in a pre-computer era where they are known to be workaholics, highly competitive and approaching retirement (Meister & Wilyerd, 2010).

Generation X, or GenX, is the smallest of the groups employed today. Members of the GenX generation are also known as the MTV generation or latchkey kids. They were influenced by the AIDS epidemic and are thought to be self-reliant, cynical, and independent. This group also grew up with more technology influences than those before them and is perched to become mentors to the millennials. Generation X members are also competing with the millennials for jobs in the global environment (Meister & Willyerd, 2010; Rawlings et al., 2008).

The latest generation to come of age is the Millennial Generation. Born in the 1980s and later, this group was born into the technology era and utilizes all the means of communication at their disposal including social networks, cellular phones, text messages and blogs, as well as have a command of the Internet. They have been influenced by the

terrorist attacks of 9/11, are committed to diversity and community service, and have a sense of immediacy and confidence (Meister & Willyerd, 2010).

In organizations with these multiple generations, leaders will be tasked to integrate different work ethics, communication styles and capabilities, expectation of management styles, wages and benefits, diversity and values. The ability to blend the generational styles and expectations together in an ever-changing technologically changing global environment will need to be challenging, creative, and flexible in their thinking (Chowcat, 2002; IBM Global Business Services, 2010a; Meister & Willyerd, 2010; Rawlings et al., 2008; Zemke et al., 2000).

Purpose of the Study

The purpose of this study is to examine the extent to which, if at all, college-level members of the Millennial Generation perceive themselves as creative. In addition, this study will explore differences in the creativity of college-level members of the Millennial Generation with regard to select demographics. Lastly, this study will examine the extent to which, if at all, there is a relationship between creativity and leadership potential among college-level members of the Millennial Generation.

Research Questions

1. To what extent, if at all, do college-level members of the Millennial Generation perceive themselves as creative?
2. To what extent, if at all, are there differences in the creativity of college-level members of the Millennial Generation with regard to select demographics?
3. To what extent, if at all, is there a relationship between creativity and leadership potential among college-level members of the Millennial Generation?

Theoretical Framework

In the increasingly global environment, fueled with high-level information and technology sources, individuals will be required to compete with creative and innovative capacities (Chowcat, 2002). Personally, creativity will require problem-solving capacities on the job (Sternberg, 2003). Collectively, innovations in science and social policies, and the demand for more high-quality products, will fuel the need for creative abilities in the population overall (Pink, 2005a; Sternberg, 2003). Economically, enhancement of goods and services lead to job creation (Sternberg, 2003). Overall, the changing nature of the world in the economic, social and political arenas, as well as the technological advances we have seen in the past several decades, have offered more opportunities, but also more competition and challenges. Thomas L. Friedman (2005), in *The World is Flat*, explains it is "empowering more and more individuals today to reach farther, faster, deeper, and cheaper than ever before, and that is equalizing power – and equalizing opportunity, by giving so many more people the tools and ability to connect, compete, and collaborate" (p. 50).

As such, the Information Age of the 20th Century is progressing into what has been called the Conceptual Age (Pink, 2005a). This 21st Century time period is transitioning from an era where workers were versatile in knowledge-based activities (computer programmers, accountants and lawyers) into those more versed in creativity, innovation and empathic activities. To be successful in this new age, skills in knowledge-based activities will be necessary, but more creative-based activities will be vital for individuals and organizations to compete in this new era (Florida, 2010; Sternberg, 2003).

To develop the skills necessary for the global environment of the Conceptual Age, learning needs to take place on both sides of the brain (Pink, 2005a). The function of the brain's two hemispheres—the right brain and the left brain—has traditionally been used for different tasks. The emphasis on the functions of the left side of the brain has been the areas involved in traditional learning—more analytical, functional and sequence oriented. These qualities have supported the traditional 20th Century need of employees that are skilled for the high tech jobs in the computer era (Chowcat, 2003; Pink, 2005a).

But as we focus more on the right brain's function, empathy, emotion and creativity are more prevalent. Employees will need to have more of the right brain skills in the future to compete in the Conceptual Age (Chowcat, 2003; Pink, 2005a). These right brain functions will lead the world with innovation, creativity, empathy and will satisfy the "aesthetic, emotional and spiritual demands of a prosperous time" (Pink, 2005, p. 61). However, both sides of the brain work together to perform almost every function. Leaders will need to determine the abilities of their employees to effectively steer their organizations in this new environment.

To achieve the necessary skills the Conceptual Age will require, a focus has been put on students now graduating from college, those of the Millennial Generation. In the wealth of information available surrounding this group, many assumptions and expectations have been made. These students and grads have been described as "more highly educated when ranked with other generations at comparable ages" (Pew Research Center, 2010, p. 10). The prediction for this group, when they all come of age, is the majority will be college graduates, which would be a record high for any generation (Pew Research Center, 2010). But their education has consisted of the traditional offerings of

our college and university system. If our education systems are the key to staying competitive with the rest of the world, the adjustment of the skills and abilities needed to compete in the future should be included in current student learning (Florida, 2010; Zakaria, 2008):

> We know how to train people to take exams. You know how to use people's talents to the fullest. Both are important, but there are some parts of the intellect that we are not able to test well – like creativity, curiosity, a sense of adventure, ambition. (Zakaria, 2008, pp. 193-194)

How are the skills and abilities needed to compete in a global landscape being addressed in the traditional institutions? Students are still enrolled in programs where the job emphasis has already shifted overseas (Pink, 2005b). The university systems are adapting to address the problem by including discussions in the classroom that consist of new trends in media, ethical questions in a global landscape, and leadership issues. However, has this been enough to address the economic changes that are challenging the country? Some think not:

> The development of the educational system has not kept pace with subsequent changes in the society and the economy. In the context of today's knowledge-based economy, ironically, it feels more than antiquated, as if it had been designed specifically to squelch creative thought." (Florida, 2010, p. 183)

The students graduating from college not only will be challenged by the appropriate knowledge and skills they have acquired, but in many ways, their ability to transition smoothly into the workforce is also questioned. The soft skills they need to be successful in the workforce are reported to be in short supply, including goal setting,

personal finance and budgeting, personal communication skills and fear of failure (Burmeister, 2008). Employers will need to assist their new employees to become successfully integrated into the corporate culture and by providing regular feedback and encouragement to their workers (Burmeister, 2008; Meister & Willyerd, 2010).

In analyzing these issues, and in reviewing the literature about the needs for future success, creativity skills are vital for not only the individual's success, but for the overall growth in the United States' economy. Over the next decade, it has been predicted the predominant type of job creation will have "shifted from manufacturing and blue-collar industries to professional, technical, and creative jobs" (Florida, 2010, p. 107). Furthermore, "We are in the midst of a tectonic shift to a fundamentally new economic order: the shift from an agricultural to an industrial economy then, the shift from an industrial to an idea-driven creative economy now" (p. 181). Florida contends the economy will tend to gravitate to two distinct types:

> Higher-paying knowledge, professional, and creative jobs (everything from high-tech engineers and software developers to managers and doctors to graphic designers and entertainment lawyers) and lower-paying routine jobs in the service economy (food service workers, nurses' aides, janitors, home health care workers, and the like). (p. 117)

Florida (2004) has recognized the need to compete on a global level. One third of the workforce in the United States fills roles that primarily need creative capacities. Countries in Europe and Asia are also gaining more of a foothold in the creative aspects of traditional American industries. He sees a shift in the sectors of our workforce – "manufacturing, service and creative sectors" (p. *xiv*). Furthermore, with more

competition and transition on the horizon, the creative capacities of our workforce need to be captured:

> We live in a time of great promise. We have evolved economic and social systems that tap human creativity and make use of it as never before. This in turn creates an unparalleled opportunity to raise our living standards, build a more humane and sustainable economy, and make our lives more complete.
>
> (Florida, 2004, p. *xiii*)

However, creativity is not recognized as a skill that should be highly promoted. It is considered to be more a luxury or "an elite distraction from the more pressing problems confronting us" (Csikszentmihalyi, 1996, p. 10). Educational institutions regularly eliminate programs in the arts when budgets are in jeopardy then tend to focus on the basics:

> More and more schools opt for dispensing with frills—usually with the arts and extracurricular activities—so as to focus instead on the so-called basics. This would not be bad if the 'three Rs' were taught in ways that encouraged originality and creative thinking: unfortunately, they rarely are. Students generally find the basic academic subjects threatening or dull; their chance of using their minds in creative ways comes from working on the student paper, the drama club, or the orchestra. So if the next generation is to face the future with zest and self-confidence, we must educate them to be original as well as competent.
>
> (Csikszentmihalyi, 1996, p. 12)

In his research on creativity, Csikszentmihalyi (1996) concludes creative solutions are utilized to problem-solve and provide solutions that are geared to the specific issue. Creativity enhances people's abilities in their education and in their work life.

Operational Definitions and Key Terms

The following terms are included here to express the meaning of the terms being used in this document.

Age: Most notably known as the number of years of a person since their birth. For this study, the age range targeted was determined by the typical college-aged student—from 18 to 28. The earliest of the Millennial Generation was born in 1982, but 24 is the highest age included in the study and 18 is the youngest due to legal age requirements (Howe & Strauss, 2000).

Algorithmic: "An algorithmic task is one in which you follow a set of established instructions down a single pathway to one conclusion. That is, there's an algorithm for solving it" (Pink, 2009, p. 29).

Assumptions: Theories or beliefs about the design and validity of the study (McMillan & Schumacher, 2006). See page 24 for comments on the beliefs about this study.

Authentic Leadership: "Authentic leaders know who they are, know what they believe in and value, and act on those values and beliefs openly and candidly" (Robbins & Judge, 2008, p. 192).

Baby Boomers: A defined group born during a baby boom, especially the one following the end of World War II during the "fertility 'boom' of 1946 to 1964." This group are predominately the parents of the Millennial Generation. (Howe & Strauss, 2000, p. 40).

Blog: A personal log or diary others may view and comment on "personal thoughts, opinions, and interests—or even artwork, photos, stories, or videos—represent unfiltered self-expression" (Tapscott, 2009, p. 45).

Chat Room: More structured than a blog, a chat room is a specific site on the Internet that focuses on specific ideas or issues and brings together varied views and input from those interested in the topic (Tapscott, 2009).

College Level: The typical college-level student has graduated from high school and is at an age to attend a two-year or four-year college or university. Typical age range for college students is 18-24 years. See *age* or *level of education*.

Conceptual: A form of thinking involving the generation of new concepts or ideas; "Open-ended tasks allow divergent thinking" (Runco, 2007, p.199). See *critical thinking* or *divergent thinking*. Opposite is *convergent thinking* where one or few answers exist to a topic.

Convenience Sample: When random sampling (each participant is likely to represent the desired population) is not entirely possible due to access to the group, the process is considered "nonrandom (e.g., conveniently selected)" (Creswell, 2009, p. 155).

Convergent Thinking: A more liner approach to the thought process. "Convergent thinking questions have one (or very few) correct or conventional answers" (Runco, 2007, p. 4). Opposite is *divergent thinking*.

Correlation: A measurement between two variables that describes "the degree of relationship" between them (McMillan & Schumacher, 2006, p. 471). In this study, a correlation between creativity and specific demographics of the sample will be measured.

Creativity: A difficult thing to define, most evaluations of creativity discuss divergent thinking, problem solving, creative personalities, intrinsic motivation and focus on creative activities. Other words that are used in conjunction with the term *creativity* include: originality; imagination; inspiration; ingenuity; inventiveness; resourcefulness; or vision.

Critical Thinking: The ability for a person to use multiple capacities to bring together many ideas; an exploration of information from past and present as well as the ability to bring impartial decisions to frame conclusions.

Demographics: A description of the group studied. For this study, age, gender, college level, and the program of study are variables. Additionally, the living location of the subject and their socio-economic status is discussed in the limitations of the study on page 22.

Dependent Variable: "The measured variable that is the consequence of or depends on antecedent variables" (McMillan & Schumacher, 2006, p. 471).

Divergent Thinking: "Divergent thinking requires open-ended questions for which there are multiple answers and solutions" (Runco, 2007, p. 4). See *conceptual*.

Echo Boomers: See *Millennial Generation*. Since this group is mainly the offspring of the Baby Boomer Generation, this was one of the early names associated with the Millennial Generation. (Howe & Strauss, 2000). See Table 2 for an outline of generational theory.

Emotional Intelligence: "The ability to manage ourselves and our relationships effectively – consists of four fundamental capabilities: self-awareness, self-management, social awareness, and social skill" (Goleman, 2000, p. 80).

Ethnicity: Belonging to a specific ethnic group. Ethnicity is not included in this study.

Gender: Being measured in a study as either male or female. In this study, creativity will be compared in male and females of college-level students.

Generation: "A society-wide peer group, born over a period roughly the same length as the passage from youth to adulthood (in today's America, around twenty or twenty-one years), who collectively possess a common persona" (Howe & Strauss, 2000, p. 40). See Table 2 for an outline of generational theory.

Generation M: See *Millennial Generation*.

Generation X or *Gen X:* The generation of people born during the years 1965 to 1981 in Western countries, especially the United States, often regarded as disillusioned, cynical, "unwanted, at-risk, throwaway, homeless, latchkey," and apathetic (Howe & Strauss, 2000, p. 41). See Table 2 for an outline of generational theory.

Generation Y: See *Millennial Generation*. This was one of the names associated with the Millennial Generation, later changed due to the negative connotations associated with the perception of negative connotations aligning with Generation X (Howe & Strauss, 2000). See Table 2 for an outline of generational theory.

Helicopter Parents: The term is an explanation for "parents who hover" (Coburn, 2006, p. 9), most notably the Baby Boomer Generation and parents to Millennials. "This generation of parents has had a hands-on approach to their children's education from preschool through high school" (p. 10).

Heuristic: "A heuristic task is opposite" [of algorithmic] (Pink, 2009, p. 30). No specified path exists to solve the problem. A person needs "to experiment with possibilities and devise a novel solution" (p. 30). The majority of work in the United States,

according to McKinsey & Co., comes from heuristic work. "A key reason: Routine work can be outsourced or automated; artistic, empathic, nonroutine work generally cannot" (p. 30).

Independent Variable: "A variable that is antecedent to or that precedes the dependent variable; in experimental design, also called the *experimental* or *manipulated variable*" (McMillan & Schumacher, 2006, p. 473).

Innovation: Innovation involves generating new ideas; usually effectiveness of the idea is also involved. Innovation has been described as "driven by extrinsic motive" (Runco, 2007, p. 382), where creativity is "driven by intrinsic motives" (p. 382). Creativity is "often self-expressive" (p. 382) where innovation is a process "designed specifically to benefit role performance, the group, the organization, or the wider society" (p. 382).

Leadership Potential: "Leadership development…enhances the ability to make a meaningful difference" (Posner, 2004, p. 443). The potential, or possibility, for leadership and developing leadership abilities is included in this study and surveyed through the Student Leadership Practices Inventory (Posner, 2010). See also Appendix C.

Left Brain: "Divided into two hemispheres, the left hemisphere is sequential, logical, and analytical…the 'left-brain' capabilities that powered the Information Age—are necessary but no longer sufficient" (Pink, 2005a, p. 3). See *right brain*.

Level of Education: The grade/level achieved in an educational setting. The focus of this study would be college-level, or freshman, sophomore, junior, senior or graduate level students. See also *college level* and *age*.

Likert Scale: "A scale of measurement, usually used with attributes which can be ordered, and which permits numerical values to be assigned to the specific attribute categories" (McCall, 2002, p.135).

Limitations: Factors that can be identified prior to running testing for a study, such as "the scope of the study, the design, and/or methodology" (McMillan & Schumacher, 2006, p. 463) that would cause "threats to internal and external validity in the proposed design" (p. 463). For this study, limitations are discussed on page 22.

Location: The area of the country where the study subjects live. The location of the subjects could describe limitations to the study and are discussed on page 22.

Mean: "A measure of central tendency; the arithmetical average of the scores" (McMillan & Schumacher, 2006, p. 474). In this study, the mean will be determined for the description of scores in the research questions. See page 8 for the research questions.

Memphis Manifesto: A group of 100 prominent creative individuals from many disciplines met in Memphis in May 2003. They wrote a 10-point "call to action" (Florida, 2004, pp. 381-382) to promote community centers for creativity.

Millennial Generation: A term used to refer to the generation, born from 1982-2004, brought up using digital technology and mass media; the children of Baby Boomers; also called Generation Y, Net Generation, Millennials, and Echo Boomers. Seven "core traits" (Howe & Strauss, 2003, p. 51) have been established to describe them: "special, sheltered, confident, team-oriented,

conventional, pressured and achieving" (pp. 51-52). See Table 2 for an outline of generational theory.

Millennials: See *Millennial Generation*.

MySpace: A social network site, "new private spaces online where young people gather en masse, network with peers and make shared spaces of their own…personal profiles on social networks are...public displays of identity" (Tapscott, 2009, p. 55).

Neoteny: This is defined as the ability to retain youthful qualities, such as "curiosity, playfulness, eagerness, fearlessness, warmth, [and] energy" (Bennis & Thomas, 2002, p. 20).

Net Generation or *Net Gen:* See *Millennial Generation*.

Population: "A group of individuals or events from which a sample is drawn" (McMillan & Schumacher, 2006, p. 475). In this study, the population is identified as college-level students and recent graduates of the Millennial Generation.

Problem Solving: The use of divergent or convergent thinking to find a solution to a goal by removing the obstacles to gain the desired result. "Cognitive theories of creativity often focus specifically on the problem-solving process" (Runco, 2007, p. 14). See *creativity*.

Program of Study: In this study, the area of emphasis in the educational pursuits of the subjects will be compared to their skill level in creativity and leadership capacities.

Right Brain: "Our brains are divided into two hemispheres…The right hemisphere is nonlinear, intuitive, and holistic…And the capabilities we once disdained or

thought frivolous—the 'right-brain' qualities of inventiveness, empathy, joyfulness, and meaning—increasingly will determine who flourishes and who flounders" (Pink, 2005a, p. 3). See *left brain*.

Sample: "The group of subjects from which data are collected; often representative of a specific population" (McMillan & Schumacher, 2006, p. 476). In this study, the sample are college-level students and recent graduates of the Millennial Generation who are associated with five selected participants through the social networking site Facebook.

Sample Size: In this study, the number of participants in the sample is determined with the use of a sample size calculator (Creative Research Systems, 2010). The size of the sample was determined to be approximately 4,000 subjects (five contributors utilizing their Facebook friend lists ranging from 400-900 each). With a 95% confidence level and a confidence interval of 5, the sample size needed for the study is targeted at 351 responses.

Situational Leadership: Based on a model by Hersey & Blanchard, "The essence of situational leadership demands that a leader match his or her style to the competence and commitment of the subordinates" (Northouse, 2007, p. 92).

Skills Model: A leadership approach "characterized as a capability model because it examines the relationship between a leader's knowledge and skills (i.e., capabilities) and the leader's performance" (Northouse, 2007, p. 43).

Social Network: "An online community of friends" (Tapscott, 2009, p. 55). An Internet/web application that allows communication between selected individuals.

"Next generations social networking platforms will unlock entirely new possibilities" to expand and spread information. (p. 56). See *MySpace*.

Standard Deviation: "A measure of variability; a numerical index that indicates the average dispersion or spread of scores around the mean" (McMillan & Schumacher, 2006, p. 477).

SurveyMonkey: "An online survey tool…researchers can create their own surveys quickly…and post them on Web sites or e-mail them for participants to complete" (Creswell, 2009, p. 149). Since technology is a strength of millennials, this online tool is appropriate for implementing the survey for the study (Howe & Strauss, 2003).

Transformational Leadership: "Transformational leaders inspire followers to transcend their own self-interests for the good of their organizations and are capable of having a profound and extraordinary effect on their followers" (Robbins & Judge, 2008, p. 188).

YouTube: A web application that allows uploading and sharing of personal videos, photos and other content to share publically. "This is a chance to see ourselves, in living color, as part of the global conversation" (Tapscott, 2009, p. 54).

Importance of the Study

"A simple, undeniable first principle is that every single human being is creative" (Florida, 2010, p. 181). This study will measure how college-level millennials will self-identify themselves as creative individuals and potential leaders. The study of this group will help identify abilities that can be bolstered and training to be incorporated into industries where the millennials might be challenged. The leaders in these industries will

need to know how to integrate these new workers into their organizations and lead with the skills they already possess or facilitate learning of new skills. And, the education community can become more aware of areas that are lacking in their programs to help students gain the skills necessary to compete in the new global society.

Limitations

This study is aimed at college-level students or recent college graduates included in the age group of the Millennial Generation overall; with the birth dates of 1982-2004, millennials would range from 6 to 28 years of age. This study looks at the range of 18-24 year olds that make up the traditional college-level age group. These students are firmly located in the millennial experience—being born between 1986-1992. The study would not include the extreme end of the age group where there might be a trend to have conflicting traits.

Since these students are mainly in the traditional college-aged years, the limitation would be the ages surveyed. Because of the use of social networking and *friend lists* on Facebook, the survey results measured will be limited to the 18-24 year range. The results could predict to have more female than male respondents due to the social network contributors selected. However, the contributors' *friend lists* consist of both males and females so the results are somewhat unpredictable due to motivation to respond to the survey.

A focus on this specific age (18-24 year olds) could indicate those not in this age group, despite being in this millennial generation designation, could have other experiences as they mature or other life factors change their perceptions. The focus on this group of students also indicates a similar socio-economic group, attending state

colleges and universities mainly located in southern California. This group could be considered more generally affluent than some areas of the country due to living and attending college in this part of the country.

Additionally, an ad will be placed on Facebook to solicit additional responses. These responses will be limited to the age group specified, but gender and location will be unpredictable.

Younger members of the Millennial Generation might have similar upbringing, but their maturity levels could indicate a similar or different response than this focus group. As well, the age group studied defines the traits of the Millennial Generation overall. It is not meant to correlate to other generations other than by comparison of already known factors.

Additional limitations could occur due to the use of the Internet and the social networking site, Facebook, as a tool to communicate to this group. Even though it is reported to be the primary way to do so, communication with similar members of this community could be considered to be somewhat skewed. However, the more viral the survey becomes, the more likely the results will be considered convincing, and as such, would show more validity as a result.

Additional concern could be considered to the gender of the respondents. If the results show more participation in the survey by females rather than males, the results could be less reliable. The desire would be to gain as even a sample as possible; however, the original survey instruments measured for validity did have considerably more female respondents.

Since the original survey instrument measurement "supports the notion that college students, high in creativity are interested in vocations which reflect their creativity" (Kelly & Kniepp, 2009, p. 82), this study is not meant to test vocation or highly creative students. Even though the survey would indicate levels of creativity, the vocations of the students are not indicated. Also, the students in prior studies with the instrument were not specifically artistic, but had a high level of critical thinking ability (Kelly, 2004). The tendencies of creativity are the only areas of results desired.

Since the surveys are self-reported attributes of the millennial subjects, the desire to exaggerate their own abilities for self-gratification might be a limitation in this survey. However, results from a previous self-reported survey dealing with creativity conclude "each individual can evaluate one's creativity with certain accuracy" (Park, Lee, & Hahn, 2002). So, if this actually is a limitation it is uncertain.

Assumptions

The decision to use Facebook as the communication vehicle for the survey was made due to the information in literature defining millennials as social and connected (Hershatter & Epstein, 2010). They reportedly connect through social networking sites such as Facebook (Meister & Willyerd, 2010), so the belief is it would be the best way to reach this age group.

As far as the specific results of the survey, literature has defined millennials as risk-adverse. This is due to their increasing need to perform and the desire to not make mistakes (Alsop, 2008). The theory this group will score low in the variable of Spontaneity is based on this information. In the previous survey results (see Table 4), this

area scored second lowest of the five dimensions. Creative Engagement scored lower than Spontaneity. As such:

> Many millennials struggle with independent thinking, decision making, and risk taking…This tendency worries some educators and employers, who foresee a generation that can't cope will with the sudden twists and turns of their jobs and of life in general. (Alsop, 2008, p. 116)

Another assumption is the respondents will be honest in their responses. When self-reporting personal skills and abilities, the question remains whether the respondents will report their abilities accurately or enhance them in the survey. Especially when dealing with creative abilities, it might be assumed the tendency would be to exaggerate those abilities.

With either creative or leadership abilities, the demographics of the survey might also tend to be heavier in female respondents. This is due to the use of the social networking sites and the contributors utilized to send the survey to their *friend lists*. The five contributors are themselves female, so an assumption would be there would be a gender bias. Still, both the surveys being utilized have previous results showing a larger female component that male.

Summary

Notwithstanding, the members of the Millennial Generation will see the future hold challenges for leaders, workers and organizations, including the education sector. Leaders will need to focus on transforming their employees into innovative, high-performance groups that work well together and find enjoyment and rewarding

employment. Emphasizing creativity in the organization will be vital for competition in the global economy:

> Another element of our contemporary culture that influences creativity and discipline-based expertise are the influences of a more global economy. The impacts of globalization could have beneficial (power sharing, an increase in multi-cultural perspectives, distribution of wealth, opportunity for developing nations/economies, etc.) or disastrous effects (dominance of strong economies over weaker economies, increased debt for developing nations, the homogenization of indigenous cultures, etc.). In either case, globalization is a very real phenomenon that Gen Xers and Gen Y/Millennials will have to address in both their professional and personal lives in ways that Baby Boomers never quite have. (Clapp, 2009, p. 5)

Chapter 2. Review of Relevant Literature

The *2007 Changing Nature of Leadership Survey* (Martin, 2007b) conducted by the Center for Creative Leadership shows challenges in the future for leaders and their organizations. Comparing the survey with one conducted 4 years earlier, respondents agreed challenges appeared in areas that required more innovative solutions; problems acquiring and developing effective employees; leadership skills including more collaboration and building effective teams; and, approaches for rewarding employees shifting to more all-encompassing methods. Most dramatically, creating innovative solutions in the workplace was high on the list of areas that impact organizational challenges.

These challenges will mean transforming many organizations. “People living and working in tomorrow’s highly information-rich society are likely to need a number of principal skills. Creativity will be vital, with employees needing to display new patterns of knowledge deployment derived from more flexible thinking” (Chowcat, 2002, p. 41). This will also include challenging employees to lead and take initiative in their work. These challenges will cause leaders to adapt if they are to keep their organizations moving forward. It will also impact the organization’s culture in keeping employees satisfied and productive.

The need for creative capacities, taught in educational institutions and delivered in the industries and businesses of the 21st Century, will be key to the success of the employee and employer as well as the economy overall (Pink, 2005a). A review of literature involving creativity and the rationale behind the Conceptual Age will be discussed in the following pages. The qualities of the Millennial Generation will also be

explored, as well as leadership challenges associated with this new group in the workforce.

Creativity/Critical Thinking

Creativity, in the form of arts in our education institutions, has dealt with long-suffering attempts to maintain its importance in required K-12 and college curriculum (Heilig et al., 2010; Welkener, 2000). In early university systems, fine arts programs were relegated to women's higher education "in the form of aesthetics and fine arts" (Welkener, 2000, p. 3) but not fully accepted into the mainstream. Seen as a necessary way to promote industrial and engineering jobs in the late 19th Century, technical skills were incorporated into classrooms. As the middle class grew and enjoyed aesthetic aspects of society, arts programs became more in demand and were viewed as important, so were incorporated into curriculum (Heilig et al., 2010).

During the first 2 highly progressive decades of the 20th Century, the arts in education enjoyed a comprehensive approach where studies and theories of learning included the need for individual student exploration. A creative approach was integrated into the mainstream courses, in part due to the work of noted philosopher John Dewey (1934). His theory of children's educational growth developed the student in mind, body and social means. Dewey's beliefs utilized aspects of creativity and critical thinking to open up experiences for students to gain an understanding of the world around them (Dewey, 1934; Heilig et al., 2010).

The arts were firmly included in the curriculum until the onset of the Great Depression. To address funding issues, art programs, among others, were cut and not considered of great importance. Lasting until more profitable times, art programs suffered

until the 1950s when prosperity once again was regained. Through the National Endowment for the Arts in 1965, the arts received sustained support and growth. Education reform in the 1980s challenged that notion. The publication of *A Nation at Risk: The Imperative for Educational Reform* (Gardner et al., 1983) reinforced the prime importance of the "New Basics" (p. 24), which encouraged the core skills of English, math, science and social studies. It also led the way for the No Child Left Behind Act of 2001 that severely limited arts education with specified testing on reading and math (Heilig et al., 2010).

Even though the *No Child Left Behind Act* does not exclude the arts from the recommended core curriculum for grades K-12, testing for specific subject matter has limited time-on-task for other subjects. As a result, several studies about the need for curriculum that includes creative outlets and critical thinking have ensued. Since then, John Dewey (1934) and other noted psychologist have studied the effects creativity has taken on the education of students, including those mentioned herein: Mihaly Csikszentmihalyi (1996), Paulo Freire (1993), Howard Gardner (2006, 2007), Kathryn Kelley (2004), Alfonso Montuori (1991), Jean Piaget (1976), Mark Runco (2003, 2007), Robert Sternberg (2003), and Michele Welkener (2000). Additionally, popular authors on the subject are also included here as commentary: Margaret Boden (2004), Richard Florida (2004, 2005, 2010), Daniel Pink (2005a, 2005b, 2009), and Ken Robinson (2001, 2010).

Creativity in education. Many opinions suggest the topic of creativity in the future will need to include a look at the process we use to educate our emerging workforce. John Chowcat (2002) expresses a need to develop more inter-disciplinary

methods to bring the necessary skills to the surface. “This issue of moving towards more inter-disciplinary teaching is, in turn, linked to the practical task of defining and building new and effective form of teamwork for teaching staffs and managers” (p. 45). He goes on to state, “a high-knowledge economy requires a workforce with rather different skills from those of the mass-production era which helped to shape our conventional school and college system” (p. 45).

Diana Oblinger (1999) discusses the value of education in a global sense. Not only is the value felt in the income levels of the more educated person, but as a part of our “social stability” (p. 251). She suggests that countries look at education as a “natural resource” that will bring “economic competitiveness” and “quality of life” (p. 251). She suggests the issues that will arise in the future will be “demographics, educational access, globalization, new models for education, information technology, and the pace of change” (p. 257).

Creativity, then, is not just restricted to the arts. The abundance of literature on creativity on the job includes business, leadership, engineering, medicine, in politics and technology (Montuori, 1991). New ideas and innovation in the workplace is, and will continue to be, a priority for a global marketplace. Education is the key to setting free those potential ideas by encouraging self-expression (Dewey, 1934; Freire, 1993; Montuori, 1991; Piaget, 1973; Welkner, 2000).

However, with the current climate of standardized testing, creativity and self-expression takes a back seat to the New Basics. A study of community college students found students believed creativity was limited to a few selected individuals so students were hesitant to believe they had creative talents (Welkener, 2000). Additionally,

students felt their creativity was stifled by faculty expectations and they feared to exhibit any more out-of-the-box thinking than what they perceived the teacher wanted to see. “It was frequently assumed that writing or speaking were the only authentic ways to transmit thoughts since education is so reliant on these instruments” (p. 265).

Howard Gardner (2006) also agrees with the flaw in the educational process that limits creative thinking—his conception of “linguistic intelligence” (p. 13) seems to correlate as one of the mainstays for creative expectation in the classroom. Other forms of creative work, on which his theory of “multiple intelligences” (p. 6) is based, are what is required for humans to succeed, and has “important educational implications” (p. 6).

Paulo Freire (1993) refers to the type of learning where the requirement is repetitive responses as “depositing” (p. 72). Students become the repository of the material the teacher deposits into their brains, taking delivery, memorizing and replicating it. He also calls upon engagement of the student in creative thought as the way to eliminate the depositing process: “Problem-posing education bases itself on creativity and stimulates true reflection and action upon reality; thereby responding to the vocation of persons as beings who are authentic only when engaged in inquiry and creative transformation” (p. 84).

Results of the same study, mentioned above, students perceived good grades were the goal over knowledge or self-expression. “The potential outcome is graduating students without the equipment necessary to choose the life that is best for them, and the ability to participate as fully as possible in a complex society,” and to that point, “the fundamental purpose of education has been defeated altogether” (Welkener, 2000, p. 269).

Still, creativity in the workplace depends on the education institutions to instill creative thought in students prior to graduation (Bronson & Merryman, 2010). Industries dispute the inability to fuel creative thought in the classroom. “Creativity isn’t about freedom from concrete facts. Rather, fact-finding and deep research are vital stages in the creative process” (p. 46).

Noted psychologist on creativity, Mark Runco (2003) says that creativity can be defined as “any thinking or problem solving that involves the construction of new meaning” (p. 318). He also says that every child has the capacity to be creative. This ability is not just found in a few talented students. He also believes creativity can be fostered and developed: “The fact that creativity is largely intentional supports the notions that ‘we can do something about creativity.’ It is not fixed at birth, nor necessarily lost in midlife or late adulthood” (p. 411).

Creative problem solving integrates both creative and critical thinking skills to define and formulate solutions. Donald Treffinger (1995) reviews “educational implications” that require “individuals and groups to invest a substantial degree of thought or reflection, imagination, judgment, and energy in their creative problem solving efforts” (p. 305). He suggests teaching creative approaches to problem solving should shift to applying and utilizing the solutions by working with real-life situations. Utilizing this method would give the students the “tools for creativity and critical thinking” to be better prepared for the future (p. 309).

Several interested parties have studied this issue. *The 2010 Horizon Report* (Johnson, Levine, Smith, & Stone, 2010), detailing a report by the American Association of Colleges and Universities sees a trend to alter this position:

> The role of the academy—and the way we prepare students for their future lives—is changing. In a 2007 report, the American Association of Colleges and Universities recommended strongly that emerging technologies be employed by students in order for them to gain experience in 'research, experimentation, problem-based learning, and other forms of creative work,' particularly in their chosen fields of study. (Johnson, Levine, Smith, & Stone, 2010, p. 4)

The need to be prepared for the future is a growing concern. In the last 2 decades, "globalization has been gaining breadth and depth" (Zakaria, 2008, p. 183). As the world economy becomes more interconnected with more communication, technology and products being exchanged, the concern about the United States competing in the new global economy becomes a huge issue:

> America is a large and diverse country with a real inequality problem. This will, over time, translate into a competitiveness problem, because if we cannot educate and train a third of the working population to compete in a knowledge economy, it will drag down the country. But we know what works. The large cohort of students in the top fifth of American schools rank along with the world's best. They work hard and have a highly scheduled academic and extracurricular life, as anyone who has recently been to an Ivy League campus can attest. (Zakaria, 2008, pp. 192-193)

Even though he sees issue in the K-12 school systems, Zakaria (2008) celebrates the higher education system as one that is revered by the rest of the world. He sees innovation as a challenge due to the large number of international students who leave with skills acquired in the U.S. who take their ideas back to their home countries:

> America's potential new burst of productivity, its edge in nanotechnology, biotechnology, its ability to invent the future—all rest on its immigration policies. If America can keep the people it educates in the country, the innovation will happen here. If they go back home, the innovation will travel with them. (Zakaria, 2008, p. 198)

Innovation, problem solving and idea generation are vital to today's economy in all parts of the world, especially the U.S., according to Zakaria (2008). With these components already a part of the culture, he feels these areas are the reason "America produces so many entrepreneurs, inventors, and risk takers. In America, people are allowed to be bold, challenge authority, fail and pick themselves up" (p. 193). To remain competitive and compete on the world stage, creativity and innovative skills should be encouraged and valued.

Robinson (2001) proposes there are "classical division of stages in creative thought: preparation, incubation, illumination, verification" (p. 135). He suggests, "creativity is a process rather than an event" (p. 135). However, traditional education "gives priority to ideas that can be best expressed in words and numbers. But some of our most important ideas can't be expressed in these ways and some of our creative abilities do not prosper in the modes at all" (p. 122).

Robinson (2001) points to a symposium held in the United States to address how "social and technological change" (p. 194) will need to drive new approaches in education and focus on creativity in the workplace. The symposium, *American Creativity at Risk*, (Alliance of Artists Communities, 1996) "concluded that universities and school programmes are now being run more like businesses, with an attention to the bottom line

that it is often detrimental to the quality of education they provide" (Robinson, 2001, p. 195). The need for new technology is extremely lacking to compete in the future economy.

Robinson (2001) suggests a long-term approach should include a change in the education systems to "meet the radically new circumstances in which they are now operating. The economic and intellectual assumptions on which our national systems of education have been built originated in another time and for other purposes" (p. 196). He challenges the system to "rebalance to conform to three principles:"

- balance across the curriculum;
- balance within the teaching of disciplines; and
- balance between education and the wider world. (p. 196)

However, Robinson believes the educational systems don't teach the skills necessary to encourage creativity to the extent necessary for future success.

The traditional education curriculum tends to encourage "knowledge and intelligence dominated by deductive reason and ideas of scientific evidence" (Robinson, 2001, p. 8). Although creativity, Robinson explains, is integral in these processes, the arts tend to be viewed as second-rate intelligence. Creativity integrates feelings and emotions that are not a part of traditional knowledge. He mentions that the increasing popularity of the communication, technology and creative industries are driving organizations to seek employees "who can think intuitively, who are imaginative and innovative, who can communicate well, work in teams and are flexible, adaptable and self-confident. The traditional academic curriculum is simply not designed to produce such people" (p. 52).

Robinson (2001) still stresses that creativity is not a separate function of intelligence. He believes "the distinctive feature of human intelligence is imagination and the power of symbolic thought" (p. 111). He believes that everyone can utilize creative capacities in the work they do, including "scientists, technologists, business people, educators" (p. 113). Robinson defines creativity as the "imaginative process with outcomes that are original and of value" (p. 118). He suggests that creativity is not an individual process. Creative people draw inspiration from people around them as well as from the environment in which they work. If the environment is stifling or not encouraging, the results become stagnant.

There are ways, Robinson (2001) suggests, an organization can develop the potential of their employees. He suggests three ways to bring about changes toward a more creative and innovative work environment: *Identify* the strengths that each individual has and utilize those strengths; *Facilitate* the right environment to promote the creative strengths in each person; and *Employ* outcomes in the organization to encourage creativity and innovation. Developing these methods will probably mean a shift in culture will be necessary. To do so, Robinson (2001) suggests some important elements:

- Bring different disciplines together for unique areas of expertise to collaborate.
- Break down departmental walls to facilitate new processes and cooperation.
- Build teamwork with individuals that have different points of view and experiences, especially age differences.
- Break down hierarchies that intimidate or squelch creative thought. (p. 22)

By giving the creative process a place to flourish, employees know they can take a risk they might not have taken before; encourage the enhancement of their own abilities; their work becomes more fun and rewarding because they know the management is open to their ideas; and they discover a more experimental way of working that opens up their creative talents (Robinson, 2001). “You know, to me, human communities depend upon a diversity of talent, not a singular conception of ability...At the heart of the challenge is to reconstitute our sense of ability and of intelligence” (Robinson, 2010, para. 13).

Robinson (2001) concludes that educational systems need to reassess their curriculum to include more creative approaches. But that is a difficult endeavor:

> One of the real challenges is to innovate fundamentally in education. Innovation is hard because it means doing something that people don't find very easy for the most part. It means challenging what we take for granted, things that we think are obvious. (Robinson, 2010, para. 5)

He feels the future depends on educators to incorporate new balances in curriculum, teaching across disciplines, and between education and the wider world.

The elements of creativity. Ken Robinson (2001) discusses all facets of creativity in the educational process, as well as in businesses and organizations, in *Out of our Minds: Learning to be Creative*. He believes the next focus in the world will be on integrating more creativity into the workplace and that demand will need to be generated from the educational systems:

> Throughout the world, companies and organizations are trying to compete in a world of economic and technological change that is moving faster than ever. As

> the axis shifts towards intellectual labour and services, they urgently need people who are creative, innovative and flexible. (Robinson, 2001, p. 1)

Robinson (2001) cites three areas that need to be understood in order to establish a creative and innovative workforce: "The first is to understand the real nature of creativity…the second is to implement a systemic strategy for developing individual creative capacities…Third, there must be a systemic strategy to facilitate and reward creative output" (p. 3).

Creativity is a much-studied topic. It is not only the focus of the arts, but as a truly human element, psychologists study how creativity is processed and who tends to be creative and why:

> Creativity is an important and fascinating topic of study, but difficult to define. This difficulty is due in part to its diverse expression; creativity plays a role in technical innovation, teaching, business, the arts and sciences, and many other fields. Many famous people have earned their reputations from their creativity; it is sometimes related to expertise. Other adults are highly creative, through perhaps in the everyday sense of coping, adapting, and solving novel problems. (Runco, 2007, p. *ix*)

Although creativity is hard to define in a brief statement, many elements have been recognized as important in the attempts to identify its qualities. The idea of creativity utilizing divergent thinking versus convergent thinking is a consistent element included in the discussion on the topic (Kelly & Kneipp, 2009). Divergent thinking applies to a more creative approach because the ideas generated lead to numerous possibilities. Convergent thinking usually has a single answer to a question posed.

Divergent thinking is usually comprised of three elements: "*fluency*, or the knack for coming up with a great number of responses; *flexibility*, or the tendency to produce ideas that are different from each other; and *originality*, which refers to the relative rarity of the ideas produced" (Csikszentmihalyi, 1996, p. 368).

Runco (2007) identifies creative personalities with specific "traits, tendencies, and characteristics" (p. 214):

> Autonomy, flexibility, preference for complexity, openness to experience, sensitivity, playfulness, tolerance of ambiguity, risk taking or risk tolerance, intrinsic motivation, psychological androgyny, self-efficacy, and wide interests and curiosity. In addition, the creative also values creativity and intentionally invests time and effort in creativity. They choose to fulfill their creative potentials and choose unconventional and original ideas and careers. (p. 214)

Kelly & Kneipp (2009), basing their theory on an extensive literature review, identifies five elements of creativity. These elements make up a "self-reporting measure of creativity as a multi-dimensional phenomenon" (Kelly & Kneipp, 2009, p. 79) developed to "measure self-perceived creativity and the creative personality"(p. 79). The "Scale of Creative Attribute and Behavior (SCAB)" (pp. 79-80) measurement is the instrument used in this study of Millennials and how they perceive their own abilities.

Creativity, as indicated by the literature studied, is identified by many traits and behaviors. Based on the Scale of Creative Attributes and Behavior (Appendix A), five components were identified:

> *Creative engagement* refers to a preference for creative activities and often spending time working on something creative. *Creative cognitive style* refers to

> the cognitive aspect of creativity involving divergent thinking and problem solving ... *Spontaneity* is a style characterized by impulsivity and novelty seeking. *Tolerance* is the attitude of flexibility and openness to others' ideas and experiences. And finally, *fantasy* is a mental activity of creativity, usually in the form of daydreaming and imagination. (Kelly & Kneipp, 2009, pp. 79-80)

Others who have studied creativity also weigh in on indications of creativity. Marc Runco (2007), outlines personality traits as a gauge of creative skill, "Creativity is, in a phrase, a vital form of *human capital*. Creativity both contributes to the information explosion and helps each of us copy and adapt to it" (p. *ix*); Csikszentmihalyi (1996) also describes personality differences as a means of identifying a creative person, "If I had to express in one word what makes their personalities different from others, it would be *complexity*. By this I mean that they show tendencies of thought and action that in most people are segregated" (1996, p. 57); and Boden (1990) breaks down the abilities of all humans as common to the creative mind:

> Creativity draws crucially on our ordinary abilities. Noticing, remembering, seeing, speaking, hearing, understanding language, and recognizing analogies: all these talents of Everyman are important. So is our ability to redescribe our existing procedural skills on successive representational levels, so that we can transform them in various ways. (p. 261)

She goes on, however, to describe the act of thinking creatively as somewhat illusive:

> Creativity itself is seemingly a mystery, for there is something paradoxical about it, something which makes it difficult to see how it is even possible. How it happens is indeed puzzling, but that it happens at all is deeply mysterious. (p. 11)

Similarities exist on the descriptions of creativity. However, all seem to agree the creative person uses their abilities in ways others don't. Creative individuals tap into the talents of all human beings, but how they utilize those abilities "distinguishes them from the rest of us" (Csikszentmihalyi, 1996, p. 51). Comparisons of these traits are outlined in Table 1, aligning them with the Scale of Creative Attributes and Behavior (SCAB), formulated by Kathryn Kelley (2004).

Table 1

Traits of Creative Persons

Scale of Creative Attributes and Behavior (Kelly, 2004)	Creative Personality Traits (Runco, 2007, p. 214)	Dimensions of Complexity (Csikszentmihalyi, 1996, pp. 55-76)
Creative engagement	Intrinsic motivation, sensitivity, autonomy, self-efficacy	Energy, concentration and focus, rebellious and independent; passionate yet objective
Creative cognitive style	Preference for complexity, wide interests and curiosity, sensitivity	Core of general intelligence, divergent thinking – fluency, flexibility and originality
Spontaneity	Risk taking or risk tolerance	Freshness and enthusiasm; openness and sensitivity
Tolerance	Flexibility, openness to experience, tolerance to ambiguity, psychological androgyny	Opposite tendencies between extroversion and introversion; humble and proud/ambition and selflessness; masculine/feminine
Fantasy	Playfulness	Paradoxical trait of playfulness and discipline, responsibility and irresponsibility – alternate between imagination/fantasy and reality

Note. Table 1 compares Creative Personality Traits and the Dimensions of Complexity with those of the Scale of Creative Attributes and Behavior instrument.

Even though the study of creativity continues, a more urgent study of the challenges of the 21st Century will lead to solidifying the importance of fostering creativity in the workplace. "Given the complexity of the business landscape, the focus on talent as a primary challenge mirrors the recent literature on succession planning, the

arrival of Generation Y, and the looming exodus of the Baby Boomer generation" (Martin, 2007a, p. 7).

Richard Florida (2004, 2005, 2010) has contributed to this discussion in his evaluations of what he has called the *creative class*. His first book, *The Rise of the Creative Class: And How it's Transforming Work, Leisure, Community, & Everyday Life*, recognizes "creative people are indeed the chief currency of the emerging economic age" (2004, p. 28). Florida suggests

> creativity involves the ability to synthesize…a creative synthesis is useful in such varied ways as producing a practical device, or theory or insight that can be applied to solve a problem, or a work of art that can be appreciated. (p. 31)

Following a few years later, *The Flight of the Creative Class: The New Global Competition for Talent* (Florida, 2005), traces the changes in the economic system, suggesting the limits to the economy will be defined

> by the limits of human talent and imagination. This fundamental shift in the way the economy is organized is also causing sweeping changes in the way we work, the way we use our time, our lifestyles and leisure, the kind of communities we choose to live in, and the personal and familial identities we construct. (p. 25)

Florida (2004) points to three roles that are required for creativity in the workplace: "technology, talent and tolerance" (p. 292). Technology and innovation are utilized more frequently and are necessary for the economy to expand. As cities grow and create jobs, the talent needed to fulfill the requirements, and the educational facilities necessary to foster the talent, will also need to be expanded. Creative types are more likely to appreciate diverse thinking and "go out of their way to be open and inclusive, and the

places most likely to mobilize the creative talents of their people are those that don't just tolerate differences but are *proactively inclusive*" (Florida, 2005, pp. 38-39). Florida (2004) also references these ideals as outlined in the *Memphis Manifesto*, a commitment by creative professionals to cultivate creativity by promoting, investing and rewarding creativity, diversity and community.

The Memphis Manifesto, written in 2003 by a group of 100 creative professionals, united to bring attention to the need for creativity in people's lives, a focus on creative education and acknowledged "the responsibility to be the stewards of creativity in our communities" (Florida, 2004, p. 382). Their principles and ideas are outlined here:

> Creativity is fundamental to being human and is a critical resource to individual, community, and economics life. Creative communities are vibrant, humanizing places; nurturing jobs and wealth, and accepting a variety of life styles and culture.
>
> Creativity resides in everyone everywhere, so building a community of ideas means empowering all people with the ability to express and use the genius of their own creativity and bring it to bear as responsible citizens.
>
> Principles:
>
> 1. Cultivate and reward creativity.
> 2. Invest in the creative ecosystem.
> 3. Embrace diversity.
> 4. Nurture the creatives.
> 5. Value risk-taking.
> 6. Be authentic.

7. Invest in and build on quality of place.
8. Remove barriers to creativity.
9. Take responsibility for change in your community.
10. Ensure that every person, especially children, has the right to creativity. (Florida, 2004, pp. 381-382)

Florida (2005) stresses the need to utilize "the full range of human creative potential" (p. 33), in order to nurture the economy. The numbers of creative-type jobs are increasing considerably. In the early 20th Century, reportedly 10% of the workforce held creative positions. In 1980, it climbed to 20%, and in the early 21st Century, "almost 40 million workers—some 30 percent of the workforce—are employed in the creative sector" (pp. 27-29).

He goes on to say the abilities of all humans are creative by nature. People generally have the opinion that only a select few have talent and all others don't possess, or don't have the ability to develop, their creative capacities:

> Creative capital is thus a virtually limitless resource. Human beings are creative in many different ways, and in many different fields that go beyond acquired skills. Each of us has creative potential that we strive to exercise, and that can be turned to valuable ends. If we are to truly prosper, we can no longer tap and reward the creative talents of a minority; everyone's creative capabilities must be fully engaged. In my opinion, the great challenge of our time will be to spark and stoke the creative furnace inside every human being. (Florida, 2005, pp. 34-35)

In his most recent contribution, *The great reset: How new ways of living and working drive post-crash prosperity* (Florida, 2010), Florida discusses the "even more

powerful and fundamental economic shift" facing the country and the need to move to a society "powered by knowledge, creativity, and ideas" (p. 111). He believes the country is facing as major a change in lifestyle, economy and focus as happened in prior times:

> Just as the Long Depression was a product of the First Industrial Revolution and the Great Depression as product of the Second Industrial Revolution, the current crisis is bound up with the Third Industrial Revolution—the shift from an economy based on making things to one that revolves around knowledge and creativity. (Florida, 2010, p. 107)

Margaret A. Boden (2004), in *The Creative Mind: Myths and Mechanisms*, discusses the innate aptitude of the human race. People have the capacity in their "everyday abilities such as conceptual thinking, perception, memory, and reflective self-criticism. So it isn't confined to a tiny elite: every one of us is creative, to a degree" (p. 1). Having a creative talent seems to be "a mystery" (p. 11), as Boden suggests. She looks at a more analytical approach to prove how creativity develops and how science can help solve the mystery.

If we all have creativity capacities, what has caused an alarm in the industry concerning the capacities of the workforce? Tamara Erickson (2008), in *Plugged In: The Generation Y Guide to Thriving at Work*, sites a survey of over four hundred managers where "almost three out of four said recent four-year college graduates displayed only 'adequate' professionalism and work ethic, creativity and innovation, and critical thinking and problem-solving skills" (p. 16). These abilities are not being developed to the satisfaction of the industry due, in part, to the challenges in the higher educational systems.

The Conceptual Age

Daniel Pink (2005a) goes beyond Robinson's (2001) analysis of the future of creativity in the workplace. He suggests the Information Age of the 20th Century is progressing into what he coins the Conceptual Age. This 21st Century time period is transitioning from an era where workers were versatile in knowledge-based activities (computer programmers, accountants and lawyers) into those more versed in creativity, innovation and empathic activities. As outlined in the article *Revenge of the Right Brain* (Pink, 2005b) and expanded on in his book, *A Whole New Mind: Moving from the Information Age to the Conceptual Age*, Pink (2005a) defines three areas that have caused the shift in the need for these abilities: Asia, automation and abundance.

Asia, he explains is where the world, especially the United States, is outsourcing a multitude of high-tech and research-oriented jobs. These workers, skilled and qualified, can cost half as much as they would at home to produce the same results. "That's why narrow left brain work such as basic computer coding, accounting, legal research, and financial analysis is migrating across the oceans" (Pink, 2005b, para. 12). As the world becomes smaller with the use of the Internet, more jobs are being sent to places like India, China and the Philippines.

Automation is making jobs obsolete with more technological innovation. "This century, technologies are proving they can outperform human brains – they can execute sequential, reductive, computational work better, faster, and more accurately than even those with the highest IQs" (Pink 2005b, para. 13). Computers and the lower cost of software programming are making the repetitive functions like financial analysis,

programming and other routine skills being done digitally more in demand. These tasks can be done by automated sources to save on the salary costs of employees.

Abundance, explains Pink (2005a), developed from a higher standard of living that has allowed the society to get used to the good life. Not only do Americans have more wealth than ever before, but also consumers are demanding items that used to be considered more of a luxury—where "beauty, spirituality, emotion" (p. 33) and well designed products abound.

Pink (2005a) explains the function of the brain's two hemispheres—the right brain and the left brain. The emphases on the functions of the left side of the brain have been the areas involved in traditional learning—more analytical, functional and sequence oriented. These qualities have supported the traditional 20th Century need of employees that are skilled for the high tech jobs in the computer era. But as we focus more on the right brain's function, empathy, emotion and creativity are more prevalent.

Pink (2005a) suggests that employees will need to have more of the right brain skills in the future to compete in the Conceptual Age. These right brain functions will lead the world with innovation, creativity, empathy and will satisfy the "aesthetic, emotional and spiritual demands of a prosperous time" (p. 61). However, he also maintains that both sides of the brain work together to perform almost every function. Leaders will need to determine the abilities of their employees to effectively steer their organizations in this new environment.

Daniel Pink (2005a) has determined that there will be six major areas, or senses, that will drive the Conceptual Age: design, story, symphony, empathy, play, and meaning. These abilities will cause a shift in the way work is done and expectations of

the employees and the leadership. *Design* involves style not just functionality. People want well-planned and attractive items. *Story* is not only the things we tell and learn about ourselves, but businesses use stories to distinguish their products from others. Stories can stimulate the emotions and weave our experiences together to make meaning of our lives.

The third sense Pink (2005a) describes is *symphony*, bringing the pieces together to form one united entity. Next, he describes another necessity, *empathy*. How we deal with each other and our relationships is the ability to empathize with another. This is a big part of the skill-set that Pink feels are necessary in the Conceptual Age.

Focusing on feelings and empathy is necessary for one's health, as is fun and play. *Play* brings more happiness and fulfillment to a person's life. Play also refers to experimentation or conceptualization where one will try new and various methods to find the best possible solution. Lastly, Pink (2005a) says that *meaning* is necessary for us "to pursue more significant desires: propose, transcendence, and spiritual fulfillment" (p. 67).

Jeff DeGraff and Shawn Quinn (2007) suggest that all organizations have creative people in their employment already, those he calls "Creativizers" (p. 34). Leaders are challenged to find, develop, and utilize the talents of these potential innovators in four areas: *Collaborative*, or customer service areas; *creative*, or the big-picture thinkers; *competitive*, current initiatives; and *controlling*, or people that are overall process-oriented in their approach. DeGraff & Quinn suggest these four areas "operate essentially the same way for individuals, organizations, and markets. The strengths, weaknesses, and interactions of these…determine an organization's ability to produce specific forms of innovation in specific situations" (p. 11).

Change in the future is also the theme Howard Gardner (2007) discuses in his book *Five Minds for the Future*. He feels that the demands of the future will bring about the need for additional skills to remain competitive. With the need for knowledge and generation of ideas, he has identified five capabilities that are vital in a globalized society: The disciplinary mind; the synthesizing mind; the creating mind; the respectful mind; and the ethical mind.

The disciplinary mind suggests mastering a craft with a very steady, determined approach. Gardner (2007) says this takes time and dedication to "a distinctive way of thinking about the world" (p. 27). Combining information from many sources into one comprehensive piece describes *the synthesizing mind*. With the availability of so much information at one's disposal, being able to integrate and evaluate it will be vital in the next century. *The creating mind* looks to the future to bring about new ideas and new ways of thinking. Being *respectful* and *ethical* are the last of the abilities; both require working with people in appreciative and responsible ways (p. 3).

Most companies look at the near future and plan accordingly. But, some creative firms, such as product design and development firm, IDEO, based in the Silicon Valley in California, have to look further than most. They develop products years into the future and have seen an "almost insatiable thirst for knowledge, expertise, methodologies, and work practices around innovation" (Kelley & Littman, 2001, pp. 3-4). Their products range from toys to laptop computers, and medical devices to shopping carts. Tom Kelley, brother of the founder, David Kelley, examines what innovation means to their business and offers suggestions to others on how to succeed in *The Art of Innovation: Lessons in Creativity from IDEO, America's Leading Design Firm.* He believes, "we all have a

creative side, and it can flourish if you spawn a culture to encourage it, one that embraces risks and wild ideas and tolerates the occasional failure" (p. 13).

Teamwork and brainstorming are at the heart of innovation and creativity. Utilizing the talents of many people can generate many more ideas than the *lone genius* can produce. The team members are passionate about their work, challenged to meet tangible but lofty goals, and rewarded for their accomplishments. This effort "generates countless breakthroughs, fueled by the constant give-and-take among people ready to share ideas and reap the benefits of the group process" (pp. 4-8). Brainstorming is a daily occurrence, and highly encouraged. The goal is to "tap into that wellspring of creativity in order to make innovation a way of life" (Kelley & Littman, 2001, pp. 4-8).

Companies like IDEO break the traditional mold in their processes. Opening up to new and innovative ideas begins with rethinking how to solve problems. Michael Michalko (2003) suggests "Creating new ideas means challenging all assumptions and thinking *productively* by looking at things in as many different ways as possible. Typically we think *reproductively*—that is, on the basis of similar problems encountered in the past" (p. 52). But to be able to encourage this type of thinking, new processes and expectations need to start from the top. People will open up to this type of thinking only if they feel safe to do so. The leadership will need to offer an environment that cultivates new processes, measurements and skills.

Burt Nanus (1990) suggests, "Some leaders say their industries are changing too fast to permit long-range thinking. But it is precisely under these conditions that long-range thinking becomes most necessary to avoid premature obsolescence of products and markets" (p.13). Nanus implies this is not a new phenomenon by quoting Lao Tzu (640

BC) from *The Way of Life*, "Solve the small problem before it becomes big. The most involved fact in the world could have been faced when it was simple, the biggest problem in the world could have been solved when it was small" (Tzu, 1994, p. 91). He suggests the leader's role is to make sure to include innovative approaches to solve problems that are addressed in the short term but to plan for the long-term where larger issues are looming. This would include solving the talent issues for their organizations.

Richard Florida agrees the trends in jobs will continue to be an issue, even becoming more threatening in the decade between "2008 and 2018" our workforce will add "15.3 million new jobs" (Florida, 2010, pp. 117-118). As the need for more jobs increase, the need for more innovative approaches will also swell. Tough times call for creative solutions:

> We are living through an even more powerful and fundamental economic shift, from an industrial system to an economy that is increasingly powered by knowledge, creativity, and ideas. (Florida, 2010, p. 111)

The Millennial Generation

Historical background. Generational theories have been recognized throughout history since before the times of Homer (Strauss & Howe, 1991). Most of these theories revolved around genealogical family ties and expected occurrences. Not until the onset of a more industrialized, progressive society in the late 1700s and early 1800s, did a more political connotation intertwine with the view of generations. Additionally, with philosophers sculpting a view of the world in new ways and the desire to find a place in history, a more serious look at how society worked overall was desired (Strauss & Howe, 1991).

Auguste Comte (1798–1857), philosopher and founder of the theories of positivism and sociology, began to discuss generational approaches to understand the pace of history (Scully, 2000). John Stuart Mill and other philosophers throughout the nineteenth century referenced the notion of *cohorts* as a description of a group in a common time who progress together to adulthood (Strauss & Howe, 1991). Developing an approach to explain how a generation creates its own reality, the 1920s brought ideas of generations associated in time with a collective mindset. José Ortega y Gasset and Karl Mannheim, utilizing the philosophies of Comte, recognized the repetitive nature of events and attitudes within groups (Strauss & Howe, 1991). Mannheim described a generation as those born at the same time who aged together, and shared a common historical location and common destiny (Scully, 2000). "Shared experiences at key developmental points contribute to the unique characteristics (e.g., values, attitudes, personality) that define and differentiate one generation from another" (Kowske, Rasch, & Wiley, 2010, p. 266).

Strauss & Howe (1991), advanced studies further "by interpreting American history through the use of a framework to analyse a repeating cycle of attitudes and approaches to life" (Scully, 2000, p. 64). They define their theory as "a cohort-group whose length approximates the span of a phase of life and whose boundaries are fixed by peer personality" (Strauss & Howe, 1991, p. 60). Strauss and Howe outlined the timeframes for the cohorts as four phases of 20 years each; every group alternates their attitudes based on the conditions that cause changes to occur. These common opinions and behaviors, with their shared place in history, define the connections and outlooks of their cohort.

In 20th and 21st Century America, comparisons between the most recent generations include Baby Boomers, Generation X and the Millennial Generation (Alsop, 2008; Coburn, 2006; Howe, 2007; Howe & Strauss, 2000, 2003; Pew Research Center, 2010; Raines, 2003; Strauss & Howe, 1991, 1997; Zemke et al., 2000). The similarities, occurrences, attitudes and outlooks of these groups are important today due to the unique attributes of the cohorts. And, outlining the future based upon their ties to history is of interest to employers, educators, historians, politicians and more.

Table 2

Generational Profiles

	Silent Generation	Baby Boomers	Generation X	Millennial Generation
Birth Years	1925-1942	1943-1960	1961-1981	1982-2004
Current Ages (2010)	68-85	50-67	29-49	6-28
Outlook	Practical	Optimistic	Skeptical	Hopeful
Work Ethic	Dedicated	Driven	Balanced	Ambitious
View of authority	Respectful	Love/Hate	Unimpressed	Relaxed, polite
Leadership by	Hierarchy	Consensus	Competence	Achievers
Relationships	Personal sacrifice	Personal gratification	Reluctant to commit	Loyal
Perspective	Civic	Team	Self	Civic

Note. The information in this table is adapted from "Connecting Generations: The Sourcebook for a New Workplace," by Claire Raines, 2003, p. 19.

Scrutinized from the time they were born, those in the Millennial Generation have been projected to be *the next great generation*, coined by Howe & Strauss (2000). They explain, "over the next quarter century, if America keeps another 'rendezvous with destiny,' the millennials could discover that they are in fact the next generation from

whom much is expected" (p. 353). "For if the future replays the past, so too must the past anticipate the future" (Strauss & Howe, 1991, p. 8).

Millennials. Born between 1982 and 2004, the millennials grew up the most protected children in the history of the United States:

> Raised with 'Baby on Board' signs stuck to their parents' minivan window; using car seats and bike helmets…this generation has been raised with laws to protect them more than any other generation in our history. Society, not just their parents, has been telling them they are 'special and valued' since Day One. (Orrell, 2008, pp. 21-22)

From the protection that was maintained in their youth, the millennials are still a focus by their *helicopter parents,* a term coined due to the involvement of overprotective parents that tend to hover over their children. "Not since the Teddy Roosevelt-era furor over runaway streetcars have adults made such serious efforts to take danger out of the child's daily life" (Strauss & Howe, 1991, p. 339). Their Baby Boomer parents, born in the '50s and '60s, are still very involved in their lives (Coburn, 2006). To adapt, colleges and universities are putting resources into place to help students succeed with the increasing involvement of overprotective parents.

Alicia Moore (2007) suggests the millennials will be the largest generation in history. "Higher education is on the cusp of an enrollment boom, with enrollment expected to peak at an estimated 15.8 million students by the year 2012—an increase of 12 percent over current levels" (p. 42). She goes on to report the need for educational institutions to re-examine how to respond to this new group on campus (pp. 42-47). Strauss & Howe (1997) agree, "colleges will be pressured into holding the line on

tuitions and student indebtedness, faculties into putting teaching ahead of research, employers into creating apprenticeships, older workers into making room for the young" (p. 250).

As these students transition into the workforce, the skills they bring, and the ones they lack, are impacting the older generations, as well, because they have much different approaches to the work environment. According to Florida (2005), the millennial's parents might be the key to their success. "Study after study has shown that, in the end, parents are what makes or breaks a child's ability and desire to become lifelong learners" (p. 256).

Millennial Generation members, overall, are expected to have specific traits and ideals. Howe & Strauss (2003), noted researchers in the field, have identified "seven core traits of the millennials: They are special, sheltered, confident, team-oriented, conventional, pressured, and achieving" (pp. 51-52). They are very connected to one another through social networking and team-oriented activities. They want to conform to the group, so are quick to follow the latest trends. They are confident in their abilities—but they have been programmed to excel by over-protective parents. Their parents pushed them to achieve, causing them to feel pressure for the need to succeed. In doing so, being sheltered and protected, they avoid risk-taking (Howe & Strauss, 2003, p. 62). A concern is they might not have the ability to really be able to solve problems out of their skill set.

This group is not the latest to be watched and analyzed as they progress into adulthood, but they are causing a great deal of attention as they enter into college and the workforce because of the way they have been brought up. These students have grown up in an age of technological breakthroughs, economic freedoms and with overprotective

parents. Their involved parents molded their outlook into a driven, inclusive and goal-oriented group that are intelligent, social and "on track to becoming the smartest, best-educated generation in U.S. history" (Howe & Strauss, 2003, p. 52).

The generation, also know as Generation M, Echo Boomers, Generation Y and the Net Generation, as outlined by Howe & Strauss (2003) have different needs and expectations which have impacted college campuses:

- Close with their parents.
- Extremely focused on grades and performance.
- Very busy in extracurricular activities.
- Talented in technology.
- More interested in math and science, and less interested in the humanities.
- Demanding of a secure, regulated environment.
- Respectful of norms and institutions.
- Conventionally minded, verging on conformist thinking.
- Ethnically diverse, but less interested than their elders in questions of racial identity.
- Majority female, but less interested than their elders in questions of gender identity. (p. 32)

Even though millennials are being tagged as the "best-educated generation" (Howe & Strauss, 2003, p. 52) in the United States, they tend to gravitate to "math and science courses best, social studies and arts courses least" (p. 63) and have the most

> confidence in their generation's lifelong ability to improve technology (97 percent), race relations (77 percent), and the economy (55 percent)—all public

> and benchmarkable spheres of social life—but far less confidence in their prospects for improving more subjective areas such as the arts (31 percent), family life (20 percent), and religion (14 percent). (Howe & Strauss, 2003, p. 63)

Florida (2005) discusses the educational impact on the millennials. He says, "first and foremost, we must strive to tap the full creative capabilities of every single human being" (p. 246). The abilities to compete in the world economy are also vital. "Investing in innovation and in our collective creative infrastructure is important for the United States and for the world" (p. 249). And the education we provide to the students, will be an essential aspect for their success as well as the economy's success:

> What we really need in order to prepare our children for the creative economy is a comprehensive education, something that takes them from aesthetics to algebra without pretending that the two are mutually exclusive. (Florida, 2005, p. 255)

Howe & Strauss (2003) agree that education is a key to encouraging creative capacities. The traits of the millennials include conformity, a trend that results in being

> less comfortable working independently and will reveal a tendency toward safety in number…[and] latent creativity of students who, having been 'taught to the test,' are unfamiliar with taking intellectual risks. (Howe & Strauss, 2003, p. 90)

The Millennial Generation is not without any creative aspects. They are involved with new technologies, the Internet, and creation of content on the Internet. They share their lives in chat rooms, blogs, on MySpace and YouTube. In *Grown Up Digital: How the Net Generation is Changing your World,* Don Tapscott (2009) explains how the generation is creative by the way they learn and play:

> I think the Internet is great for creative young minds. Remember that the vast majority of teens play video games, and…play for them is not a giddy childlike activity…this kind of play is deeply creative. It involves trial and error, learning by experiment, role playing, failure, and many other aspects of creative thinking. (p. 114)

However, Ron Alsop (2008), in *The Trophy Kids Grow Up: How the Millennial Generation is Shaking Up the Workplace,* calls this group "a scared generation" who are too tentative and "afraid to take risks and make mistakes" (p. 123). He goes on explain:

> 'Creativity scares me,' a member of the millennial generation told me. 'I think we are a scared generation, scared to take risks, scared to think independently for fear it may produce ridiculous ideas. We are a generation that seeks approval.' (p. 124)

Richard Florida (2005) sums up the abilities of the new generation in the Conceptual Age by discussing the needs of the country. "Our future depends more than anything else on smart, creative kids" (p. 256). The ability of the human race to adapt to the needs is his hope:

> Maybe I'm an eternal optimist, but I think the United States can continue to be a beacon of openness for the creative class – and, indeed, for the whole of humanity. It has a long history of resourcefulness and creativity to draw on, and it has transformed itself many time before, rebuilding after the Great Depression and bouncing back after the Asian manufacturing boom of the 1980s. (p. 269)

Workplace Challenges

The Millennial Generation will bring challenges to the companies in which they are employed (Zemke et al., 2000). This section will discuss the issues surrounding the

millennial generation's impact on organizations and explore the efforts necessary to meet the challenges in the times ahead.

The impact of the Millennial Generation on the workplace seems to be concentrated in the literature in the following areas: (a) Adaptation by the millennials in the new environment with pre-determined expectations (Alsop, 2008; Erickson, 2008; and Reiser, 2010); (b) Adaptation by the leadership and organizations to attract and keep these new employees—holding their hand and helping them build success in their roles (Burmeister, 2008; Howe & Nadler, 2009; Lancaster & Stillman, 2010; Sujansky & Ferro-Reed, 2009; Tapscptt, 2009); and (c) Incorporating the existing generations into a harmonious and successful organization with advantageous for all the employees regardless of the generation. The latter seems to be the most desirable for all employee engagement, but also the largest challenge for the leadership and management of the employees (Finkelstein & Gavin, 2009; Marston, 2007; Raines, 2003).

A focus on millennials. Not surprisingly, the members of the Millennial Generation have a specific outlook about their careers. They do not have the same driven work ethic as their baby-boomer parents or the Gen X work-life balance expectations (Finkelstein & Gavin, 2009). They anticipate the ability to contribute to their work environment from day one, not feeling out-of-line in the least for those that have seniority or may be their superior. They are far different from other employees due to their upbringing and

> their thinking, expectations, resourcefulness and results. They are paradoxically more psychological and less pragmatic than other generations at work. They do not perceive boundaries of time, space, age, gender, race, ownership or country

> of origin. They create their own learning experiences by being an integral part of the content. They favor random access over hierarchy or linearity. And they use technology the way the rest of us use breathing: to bring bodies of knowledge, modes of thought and ideas of abstraction to life. (Finkelstein & Gavin, 2009, p. 67)

Due to their technology experiences, millennials are ready to come up with new solutions, "designing new programs or websites, and using online communities to enhance their workplaces" (Reiser, 2010, p. 97). Their real advantage is in finding ways to streamline processes or to create "efficiencies…through the creative employment of technology" (p. 97). Furthermore, the use of social media is second nature to millennials.

Millennial Generation employees are also filled with expectations and desire "measureable achievement and advancement in the workplace" (Howe & Nadler, 2009, p. 12). However, the millennials' acquired skills might not prove enough to realize their expectations:

> The real truth is that your young employees are all just beginning their career journey and need to continue developing themselves in order to help your organization continue to achieve great results. Even if they don't know how to ask for it, they need your help in learning important lessons in a way they can understand. Over time, with your assistance, young professionals will pick up the skills they need to succeed in your organization. (Burmeister, 2008, p. 7)

Additionally, millennials have an expectation to quickly become a valued member of the team. Their experiences have shown strengths in working together on group projects. How they are allowed to integrate into the existing organizational structure will

determine the success of this group. However, they will need "mentorship and guidance that will help them to further develop skill sets that may need work, and developmental supervision is key to this endeavor" (Reiser, 2010, p. 114).

> Formal coaching programs can be a useful tool, whereby more seasoned professionals serve as a resource to newer Millennial employees, but recognition of the skills sets and talents that Millennials bring to the workplace will be essential to their professional satisfaction as well.
>
> (Reiser, 2010, p. 143)

Although the millennials have high expectations to make their mark on the business world, the reality is they have some work to do to gain the professionalism and skills necessary to make a successful transition into the workplace. They cannot do it alone. Even though they might be eager to succeed, their abilities need to be integrated into the rest of the culture already existing in the organization. With those issues addressed in the next section, Reiser (2010) warns that millennial employees should be taken seriously:

> Millennials bring a great deal of hope, determination, skills, and ideas from which organizations can benefit significantly if we allow ourselves to shed the antiquated notion that only the more experienced colleagues have value to contribute to the larger workplace issues and conversations. We are not using these young employees well if we only engage them in less important roles or conversations. We are losing potential growth opportunities with such missteps. (p. 160)

Changes for the organization. As the millennial generation of employees is integrating into the workforce, organizations are realizing the need to adapt. The literature has outlined some ways for the company to cope with challenges that might occur. The discussion centers on the leadership's approach to integrating the new workers with existing employees (Finkelstein & Gavin, 2009; Reiser, 2010). The challenge, again, focuses on generational differences. Another aspect discussed is developing programs to train all employees, and capitalize on, celebrating the differences and integrating strengths of all generations for the success of all.

Leaders of all organizations should want their employees to be effective, successful and engaged. Millennials are no exception. Suggestions for their success could be in the hands of the leader. Mentoring, coaching and developing these new employees could be the key to the success of the employee and the organization. However, understanding their needs is crucial to the effectiveness of the effort. "Organizations may be able to respond to these issues with the enhancement of existing leadership development programs that aim to teach this new generation of employees everything from issues of workplace technology etiquette to proper professional communication" (Reiser, 2010, p. 98).

Since millennials are technologically savvy, organizations also need to upgrade their technology to attract new employees. Their abilities to help the organizational processes with strategies utilizing technology could create ease for all. And, engaging the millennials in teaching others about technology could be an advantage:

> Companies need to be willing to invest in technology upgrades, as the quality of technology within the organization will be a major factor in where the Millennial

> candidate chooses to go to work. And Millennials have a lot to offer to the organization with their knowledge base and developing reverse-mentorship programs that enable Millennials to teach older colleagues how to better utilize technology. (Reiser, 2010, p. 98)

As mentioned previously, millennials are very team oriented. Utilizing this knowledge could allow the organization to develop initiatives to take advantage of their abilities; "these can include structured group-based leadership and professional development programs that emulate those that they are used to, which have the additional effect of providing to them a concrete validation of the organization" (Reiser, 2010, p. 114). Additionally, adjusting the actual workspace could better emphasize the team dynamic. Utilizing new media and flexible scheduling to allow "virtual workplace teaming" could have a "positive impact on the enhancement of a vibrant collaborative environment" (p. 114).

But why should organizations go to extremes to incorporate this new group into the workforce? With the established employees, managers and leaders at the retirement age, more need to fill vital roles will be critical for the organization to continue to succeed. But, since millennials are not as loyal to the organization as their boomer counterparts, it is expected millennials will average "8.6 jobs between the ages of 18 and 32. At an average $75,000 worker replacement cost, not understanding the new generation of workers is an extremely expensive exercise in futility" (Finkelstein & Gavin, 2009, p. 17).

As organizations realize the need to integrate new workers into their ranks, some recommendations have already been made:

- create workplaces that attract, retain, and motivate creative talent;

- eliminate artificial boundaries (organizational structures, generational outlooks, industry segments, geographic borders, product lines, intellectual ownership);
- leverage technology;
- incubate creativity;
- welcome innovation;
- foster commonalities among all parties to business relationships – team members, consumers, suppliers;
- enable work to be done ubiquitously – when and where needed; and
- accelerate productivity. (Finkelstein & Gavin, 2009, pp. 131-132)

Of course, the Millennials are not the only employees to be impacted. Existing workers will need to adjust and understand the desire to integrate all generations into the organization successfully. Communication and training are key to understanding and encouraging all employees to collaborate. These topics are outlined in the next section, encouraging organizations and their multi-generational workers to all succeed, as outlined here:

> To unlock that future, organizations need to create unique, personalized experiences in the workplace for every employee, unleashing and leveraging the capabilities of each worker, playing off the experience and unique strengths of both generations and individuals. In other words, Boomers' experience, perseverance and social conscience; and Millennials' boundaryless perspective, technological wizardry and need for meaningful work must fuse and create the future of each organization. (Finkelstein & Gavin, 2009, p. 129)

Integration of generations. Collaboration between the generations in the workplace, therefore, has been seen as the more advantageous approach to integration of the new employees into organizations.

Mobilizing three or more generations (boomers, gen-xers, and millennials) to adapt to new expectations, regardless of size or importance, is a huge undertaking. Changes do not come easy to most employees; however, millennials tend to embrace change (Sujansky & Ferri-Reed, 2009). So, to go down this path, requires major planning and meticulous execution to make sure the change process goes off with no problems.

Breaking the rules and focusing on non-traditional methods is the focus of Warren Bennis and Robert Thomas's (2002) book, *Geeks and Geezers: How Era, Values, and Defining Moments Shape Leaders*. The look at leadership in the older generation (over 70 years old) and those of the digital revolution (under 35 years of age) show similarities in how the two groups became leaders. The eras that defined the generations was an important factor in their leadership ability; and the values they had developed from their experiences tended to determine how they performed. In each of these groups, the leadership skills that emerged were determined by a "crucible" (p. 14) or event in their lives that was so significant that it reshaped their outlook on life and took them in new directions.

One of the qualities that emerged in the leaders, both geek and geezer, was what is termed "neoteny" (Bennis & Thomas, 2002, p. 20). This is defined as the ability to retain youthful qualities, such as "curiosity, playfulness, eagerness, fearlessness, warmth, [and] energy" (p. 20). Whether young or old, these leaders remain "open, willing to take

risks, hungry for knowledge and experience, courageous, eager to see what the new day brings" (p. 20). These qualities keep the older leaders young and ready for whatever life brings to them. The authors call this an "adaptive capacity" (p. 101) which gives the leader the ability to remain open to new things and not limited to the ways of their past. These adaptive abilities lend to creativity and problem-solving capacities, which in turn, keep the leader feeling younger and more vital.

Trends to build the bridges between the older generation of leaders and upcoming leaders, often called *millennials*, will be a prime concern in the near future. Corey Criswell and André Martin (2007) suggests the baby boomer generation, many of whom will be retiring in the coming years, will leave a large void to fill with new leaders. The challenges to be faced will include a shortage of managers and executives that have the skills, knowledge and personal networks necessary to keep organizations running smoothly. As such, "organizations will need to find innovative ways to attract and retain older workers while meeting the development and career needs of those just entering the workforce" (p. 12).

The divide between the generations is estimated to escalate in the near future. Lisa Orrell (2008) projects "the U.S. will lose 30-40% of its workforce due to retirement over the next 5-10 years" (p. 14). In her book, *Millennials Incorporated: The Big Business of Recruiting, Managing and Retaining the World's New Generation of Young Professionals*, Orrell traces the impact of the new generation in the workforce to the Millennial Generation who are "just NOW starting to enter and impact the professional work environments" (p. 15).

Leadership challenges occur when there are diverse groups to contend with. Leaders need to cultivate the new workers into the existing culture. The other employees can come to resent attention paid to the newbies:

> The tension around talent versus tenure has been complicated by the steady upending of the pyramid at work. For centuries it was assumed that employees who had been around a long time automatically knew more than the younger ones did. Today, that's not necessarily true…the age of specialization has intensified this divide. Because we see lightning-fast technological developments in many fields, it's common now for recent graduates in math, science engineering, or nursing to know more in certain areas than those who've been in the workplace a while. (Lancaster & Stillman, 2010, p. 57)

However, the ability for the Millennial Generation to create new ideas is high. And the other generations do not necessarily appreciate these upstarts overshadowing their efforts:

> We said Millennials received high marks for their ability to break new ground; we didn't say the other generation got high marks for being able to deal with it. But this is something every generation needs to pay attention to, for two reasons. First, innovation, when done right, benefits everyone…Second, the ability to find smart, creative solutions to problems at work gives Millennials a sense of meaning that connects them to the organization. (Lancaster & Stillman, 2010, pp. 103-104)

Organizations that need to adapt to these new workers might be challenged to do so. "Millennials have some learning and growing to do, and certainly need to build their

professional maturity and skill sets to succeed in the work environment" (Reiser, 2010, p. 160).

Alsop (2008) agrees, and suggests the millennials have some ways to go to keep up with their peers. "Many millennials struggle with independent thinking, decision making, and risk taking" (p. 116). With only 25% of the college students graduating from college, a gap in the future for "essential skills in the workforce" is a real concern (Erickson, 2008, p. 15). And, of those that do graduate, a lack of "professionalism and work ethic, creativity and innovation, and critical thinking and problem-solving skills" are deemed only "adequate" in a survey of "human resource managers at four hundred companies" (p. 16).

The big questions, then, is how to bring these groups together. Encouraging the millennials and the older employees to work together to be the most productive would be crucial for the groups to coexist successfully. "These generations must first understand themselves, and then understand each other. Mutual understanding between them is crucial because the relationship between them is the fuse that will ignite the full power of the creative economy" (Finkelstein & Gavin, 2009, p. 68).

The opportunity for organizations to build bridges between the generations is key to their successes. Organizing training and professional leadership programs is only a part of the effort. An understanding of each other's strengths, outlook and backgrounds could create a mutual appreciation and knowledge of one another's abilities:

> It is clear that education will be key in supporting the effective work of a cross-generational workplace. Millennials need to understand the mindset and experiences of older employees, just as the older employees need to develop a

> better understanding of their new young colleague. The goal is to develop appreciation and even tolerance, amidst these groups with such different psychologies and outlooks – without this, there is a risk to the collaboration that often needs to occur in today's professional environment. (Reiser, 2010, p. 94)

As in any organization, the values the employees bring to the group are what make an organization unique and successful. Integrating groups together is challenging but when accomplished, they become not only gratifying for the individuals, but encourages productivity, creativity and innovation, fosters relationships and retains the talent so necessary for the organization's survival (Finkelstein & Gavin, 2009). "Tapping into the best of everyone gives us a variety of perspectives, styles, and opinions. Those differences then become a source of creativity, strength, and opportunity" (Raines, 2003, p. 9).

Leadership

Leaders have been studied for almost two centuries; from the beginning of known civilization, there have been leaders and followers (Bass, 1990; Stone & Patterson, 2005). Whether called kings, patriarchs, chiefs, prophets or gods, there have been role models for people to follow, stories told to model behavior, and authorities to keep the peace. In the beginning, leaders used their authority and power to instill obedience. History has been told through the stories of the leaders who made history happen (Bass, 1990).

From the Pharaohs and Confucius to Plato, Aristotle, and Machiavelli, leadership has been written about, studied and expected behaviors have been touted. Whether based on family ties, tribes, military, religious, politics or nationalism, businesses, sports teams and the like, "leadership is often the single most critical factor in the success or failure of institutions" (Bass, 1990, p. 8). Leadership has been the determining factor of group

dynamics: the distinguishing factor between the leader and the other members of the group. (Bass, 1990; Stone & Patterson, 2005).

Theories about what qualities leaders possess are plentiful. Definitions of leadership revolve around qualities of personality, competence, compliance, influence, persuasion, power, goals, structure, strategies, empathy, relationships, and many more. Models, traits, and theories of organizational structure and how leaders behave in situations are some of the frameworks followed by legions of administrators. Leadership in the plentiful literature is described predominately as an individual action. "In fact the role given to followers is that of a 'reactor" to leaders, either individually or groups of followers" (Mastrangelo, 2000, p. 4).

This study concentrates on several theories and styles most appropriate in dealing with a future global perspective of creativity in leadership: Leadership styles, authentic leadership, situational leadership, skills approach, transformational leadership and emotional intelligence will be discussed. Furthermore, styles of leadership centered on the needs of the Millennial Generation will be the focal point.

From the millennials perspective, leadership comes in two forms—the leaders in organizations where they work and the millennials themselves as leaders—now or in the future. Challenges exist for both forms, but for leaders with millennial followers, many suggestions are available. Several studies have found the millennial workers to be as competent as the rest, however their expectations are where the challenges exist (Hershater & Epstein, 2010; Mastrangelo, 2000; Myers & Sadaghiani, 2010; Ng et al., 2010; Pasieka, 2009).

Expectations of millennial employees include close connections and continuous feedback from their superiors, open communication, work produced in teams (due to their desired social connections and their avoidance of risks), corporate social responsibility, cultural diversity, empowerment, quick promotion, and the use of technology to provide the greatest productivity (Mastrangelo, 2000; Myers & Sadaghiani, 2010; Ng et al., 2010). "Millennials care about authenticity and institutional values because they are counting on working within organizations to drive change" (Hershater & Epstein, 2010, p. 221).

And change is not only looming, it is already within sight. "There is a growing body of research suggesting that the attitudes, behaviors and leadership styles of Millennials—tomorrow's leaders—will be markedly different than previous generations" (IBM Global Business Services, 2010b, p. 1). In two recent surveys, global chief executive officers and millennial college-aged students were polled about the challenges of the complex global environment and challenges faced by leaders.

The CEOs surveyed realized the complex nature of the economic times means a refocus on three main areas: "Embodying creative leadership; re-inventing customer relationships; building operating dexterity" (IBM Global Business Services, 2010a, p. 21). The leaders realized they needed to build organizations where creativity was the norm. To attract and retain the millennial generation of workers, to recognize change as flexibility and innovation in their organizations, and to compete in the global economy, "we need to find, recognize and reward creativity" (p. 30).

> Today's CEOs know that creativity is an essential asset and that it must permeate the enterprise. Creative leaders—which include CEOs and their teams—are

courageous and visionary enough to make decisions that alter the status quo. In addition, they increasingly deploy a broad range of innovative communication tools to engage with a new generation:

- Embrace ambiguity.
    - Reach beyond silos.
    - Exemplify breakthrough thinking.
    - Act despite uncertainty.
- Take risks that disrupt legacy business models.
    - Pilot radical innovations.
    - Continually tweak your models.
    - Borrow from other industries' successes.
- Leapfrog beyond "tried-and-true" management styles.
    - Strengthen your ability to persuade an influence.
    - Coach other leaders.
    - Use a wide range of communication approaches. (IBM Global Business Services, 2010a, pp. 32-33)

The college-level students and CEOs agreed that creativity was the aspect of leadership needed to survive in the global environment. Both groups realized leadership with a creative approach allowed "disrupting the status quo and taking bold rather than incremental steps" (IBM Global Business Services, 2010b, p. 9). However, disagreeing with the CEOs, the students identified the next two issues as most important: "*Globalization* was one, *sustainability*, both environmental and societal, was the other.

Students' comments made it clear that, for them, the two themes were very much intertwined" (p. 6).

It is clear the millennials intend to be involved in solving larger issues. "I want to make a difference" (Rawlings et al., 2008, p. 6) is the battle cry for the generation. They have seen disasters, conflict, roadblocks and inequalities that made them realize they can be effective with problem-solving and technical abilities. Overall, leaders describe their millennial employees as self-confident and have a desire for socialization and team-oriented activities (Pasieka, 2009).

Millennials, however, will bring new challenges for leaders. The ability of the leaders in organizations will need to adapt to this new workforce. Leading organizations where creativity will flourish will require leaders to allow spontaneity, experimentation and flexibility. The leader should be empathetic, dedicated to development and training of his or her workforce, with an authentic style. A leader needs to be trusted, respected and focused on a vision and willing to take risks (Zemke et al., 2000, pp. 216-217).

Goldsmith, Greenberg, Robertson, & Hu-Chan (2003) take the leadership challenges to the next steps in *Global Leadership: The Next Generation*. They identify core issues that need to be addressed by leaders in a global society: "thinking globally, appreciating cultural diversity, developing technological savvy, building partnership and alliances, and sharing leadership" (p. 2). The most interesting of these, and most necessary for the Millennial Generation, is *sharing leadership*. Teamwork has been a focus for the millennials in how they have been educated, trained and work. "No one leader can be good at everything, which leads us to the conclusion that shared leadership

across a team of leaders will be the way in which excellent global companies do business in the future" (p. 5).

Furthermore, leaders will have to deal with a change in the type of jobs in their organizations. The jobs that will be required to grow our economy and nation will be shifting to more "knowledge-based work" (Erickson, 2008, p. 170). However, the millennials show more concentration "in math and science than in the arts or social sciences" (Howe & Nadler, 2009, p. 12). Their "left-brained tilt" (p. 12) is counter to the growing need for "knowledge-based" abilities; "Knowledge work makes up an estimated 40 percent of U.S. jobs and accounts for 70 percent of job growth since 1998" (Erickson, 2008, p. 170).

According to the Bill and Melinda Gates Foundation (2009), there is another issue at hand - "demographic trends: The shortage of U.S. workers will only worsen as the baby boomers retire from the workplace with fewer skilled employees in the pipeline to replace them" (p. 5). With fewer skilled employees to replace the retiring workforce, the millennials will be in demand. Their managers and leaders will need to train and develop their workers to enhance their skills to fill the needs. Training and continued education will be vital if these employees are in position to succeed and fill the roles they desire (Erickson, 2008).

Nonetheless, help for supporting the new workforce is already being discussed. Lisa Orrell (2008) suggests those in leadership positions will need to have solid strategies to meet the challenges ahead. She recognizes 12 strategies, high in emotional intelligence and continued training that focus on leading the new employees:

1. Be sensitive & abandon a curt approach.

2. Treat them with respect.
3. Get to know them personally (outside interests, hobbies, etc.).
4. Encourage them to share ideas & speak-up at meetings.
5. Set-up your work environment for idea sharing.
6. Coach about establishing credibility in the company.
7. Establish training, mentoring and even reverse mentoring programs.
8. Be open-minded.
9. Be clear & concise, but allow freedom to determine best route.
10. Challenge a lot & delegate.
11. Be a good leader & a team player.
12. Have fun & show your sense of humor. (pp. 79-85)

The future will hold challenges for leaders, workers and organizations. Leaders will need to focus on transforming their employees into innovative, high-performance groups that work well together and find enjoyment and rewarding employment. Emphasizing creativity in the organization will help avoid the pitfalls or obstacles that could occur. “Leadership is effective only if it can create a positive, supportive environment that frees people to do their best creative work” (Kerfoot, 1998, p. 98).

Leadership styles. From the challenges identified by the literature reviewed herein, the approaches or theories most appropriate for the needs of the future creative environments should include: the authentic leadership approach; situational approach; skills approach; and transformational leadership. Additionally, aspects of emotional intelligence should be utilized in the approaches used to lead these employees. These styles are discussed next.

Authentic leadership. Visionary and ethical behaviors are important factors in this look at creative leadership. Leaders need to show they can be trusted and have the needs of the employees at heart. Additionally, they need to make the employee feel safe enough to contribute to the brainstorming process without fear of retribution. "Authentic leaders know who they are, know what they believe in and value, and act on those values and beliefs openly and candidly" (Robbins & Judge, 2008, p.192). Authentic leaders don't try to fit another style; they are their own person. Qualities that make an authentic leader include:

- understanding their purpose;
- practicing solid values;
- leading with heart;
- establishing connected relationships; and
- demonstrating self-discipline. (George, 2004, p. 30)

Situational leadership. Adapting to a style that fits the situation at hand is the strength of this theory. Using both task oriented and behavioral approaches, the needs for the creative types should focus on the behavioral aspects of this theory. Because the creative process focuses on ideas rather than tasks, there might be challenges with this theory. "The essence of situational leadership demands that a leader match his or her style to the competence and commitment of the subordinates" (Northouse, 2007, p. 92). Situational leadership utilizes styles that include delegating, supporting, coaching and directing. Depending on the skill-set of the particular employee, one of these styles would be appropriate according to the task needing to be accomplished. In particular, the

coaching and supporting styles would be conducive to a creative environment. This style of leadership would also be effective in adapting to a multi-generation environment.

Skills approach. Even though this approach is more leader-centered, the skills necessary to lead an organization, especially a creative one, are appropriate in this case. The three main components of the skills approach include technical skills, human skills and conceptual skills. All three of these components are vital in the creative and innovative world. If the leader is adept at utilizing these approaches, and can utilize authentic behavior in the process, this leadership style could be very effective in a creative organization. "Conceptual skill is most important at the top management levels. In fact, when upper-level managers do not have strong conceptual skills, they can jeopardize the whole organization" (Northouse, 2007, p. 42).

Transformational leadership. Probably the most desirable approach when dealing with creative employees, and according to the literature about the millennials, would be a transformational method. These leaders are follower-focused and inspire them with vision and purpose. They provide mission and purpose and garner "respect and trust" (Robbins & Judge, 2008, p. 189). A transformational leader develops the individual and coaches them to see new possibilities. Creativity and innovation flourish under a transformational leader's influence. Bass & Avolio (1994) connect four attributes to the transformational approach:

- idealized influence;
- inspirational motivation;
- intellectual stimulation; and
- individualized consideration. (p. 33)

"Transformational leaders inspire followers to transcend their own self-interests for the good of their organizations and are capable of having a profound and extraordinary effect on their followers" (Robbins & Judge, 2008, p.188). Gardner (2007) agrees that creativity is essential in a transformational leader:

> In general, we look to leaders…for examples of creativity. The transformational leader creates a compelling narrative about the missions of her organization or polity; embodies that narrative in her own life; and is able, through persuasion and personal example, to change the thoughts, feelings, and behaviors of those whom she seeks to lead. (Gardner, 2007, p. 7)

Kouzes & Posner (2002) employ transformational approaches in their theory as well: model the way; inspire a shared vision; challenge the process; enable others to act; and encourage the heart are behaviors that lend themselves to the transformational approach.

To emphasize the transformational methods, it is necessary to balance the needs of the followers, the organization and the leader. The leader needs to balance their own behavior and skills to that of their employees. Adding emotional intelligence to the mix would assist the transformational leader in completing his or her approach (Goleman, Boyatzis & McKee, 2002, p. 59).

Emotional intelligence. Leaders that are secure with their own emotions and are sensitive to their followers needs are leaders with emotional intelligence. The five components of emotional intelligence include:

- Self-awareness: being aware of what you're feeling.
- Self-management: the ability to manage your own emotions and impulses.

- Social awareness: the ability to handle the emotions of others.
- Relationship management: the ability to influence and motivate followers. (Goleman et al., 2002, p. 39)

A sense that happy workers are productive workers is a concept that comes from emotional intelligence. When a leader can establish good morale in his or her workers, more creativity and innovation can take place. Daniel Goleman (2000) discusses six leadership styles in detail that are formed from the emotional intelligence model:

> *Coercive leaders* demand immediate compliance. *Authoritative* [also called Visionary] *leaders* mobilize people toward a vision. *Affiliative leaders* create emotional bonds and harmony. *Democratic leaders* build consensus through participation. *Pacesetting leaders* expect excellence and self-direction. And *coaching leaders* develop people for the future. (p. 80)

Leaders across all organizations are watching the Baby Boomer Generation retire, and their leadership will need to be replaced, or shared, with new leaders. How those new leaders are mentored, coached and trained will be valuable to their success as well as the organization's success. The Gen-Xers and the Millennial Generation employees value leaders who they trust. "They test their employers to find out if they have it. When they find it, they stick close to those leaders" (Marston, 2007, p. 142). Those who are effective in their particular style of leadership will entice, encourage and hold on to the employees who are valuable, creative and reliable. All employees, but especially Gen X and millennials, "are loyal to people, not to companies" (p. 142). Those who encourage effective leadership in their organizations will find a well-integrated employee, crossing all generations.

Summary

The convergence of the Conceptual Age, with the need for more creative approaches in solving problems and innovation, as well as the coming of age of the Millennial Generation, will challenge the leadership styles and abilities of our organizations. Richard Florida (2005) sums up the importance of these issues and requires attention on everyone's part:

> The creative age requires nothing short of a change of worldview. Creativity is not a tangible asset like mineral deposits, something that can be hoarded or fought over, or even bought and sold. We must begin to think of creativity as a common good, like liberty or security. It's something essential that belongs to all of us, and that must always be nourished, renewed, and maintained—or else it will slip away. (p. 269)

Chapter 3. Methodology and Procedures

Overview

The students identified as the Millennial Generation have come to college under the timeframe where the No Child Left Behind Act of 2001 dictated batteries of math and English testing. Due to the extended time for testing, other areas of curriculum have been marginalized, including humanities, science, and art programs (Heilig et al., 2010). As a result, the reduced availability to gain adequate creative/innovation capacities during their education to properly equip them for their future careers has been noted (Bronson & Merryman, 2010; Duncan, 2010; McMurrer, 2008). Creativity/innovation, critical thinking and problem solving abilities will be necessary in their future as the millennials transition into the workforce (Florida 2004, 2005, 2010; Freidman, 2005; Pink, 2005a; Sternberg, 2003). A study of the perceptions of college students and recent graduates who are considered a part of the Millennial Generation was conducted to determine if this is indeed the case. This chapter outlines how the study was conducted and how the data was gathered and analyzed.

Research Approach and Design

To analyze this issue involved surveying a sample of Millennial Generation college students and recent college graduates for self-identified skills relating to creative ability. “A multidimensional measure should assess the behavioral, cognitive, and personality factors which, when taken together, account for creativity” (Kelly, 2004). Additionally, a self-reported assessment of leadership ability was included in the survey. The capability of the group to incorporate creativity and innovation skills into their future work, including leadership potential, will come from their recognition and self-

confidence in their own abilities and their employers ability to mentor and coach the young employees (Hershatter & Epstein, 2010; Meister & Willyerd, 2010).

To gain the best results for this study, a number of elements were included in the design and methodology: the instruments selected for the survey, the validity and reliability of the instruments, a definition of the survey population and sample, a plan for implementation of the surveys, and an analysis of the data gathered. Also included are assumptions about the research/study and limitations of the survey and it's implementation that further defined the process.

Subjects

Population. The Millennial Generation consists of over 76 million persons, and is expected to "surpass the 80-million-member Baby Boom Generation in size in the 2010 census" (Lancaster & Stillman, 2010, p. 5). Ranging from 6-28 years of age, the population of the whole Millennial Generation would not effectively measure the factors required. This is due to varying experiences by the older and younger members of the group. To more closely evaluate the factors of creativity and leadership, the population was narrowed to target college level members of the Millennial Generation, ages 18-24.

Sampling technique. Developed by college students in the Millennial Generation, social networking has become a primary means of communication "with more than 350 million users on Facebook, 50 million users on LinkedIn, and 44.5 million users on Twitter as of August 2009" (Meister & Willyerd, 2010). It was advantageous to utilize a social network to communicate with this group due to their high use of the media: "72% of online 18-29 year olds use social networking websites" (Lenhart, Purcell, Smith, & Zickuhr, 2010, p. 3). A survey containing two instruments was sent through the

Facebook social network, one dealing with creativity the other leadership potential. To gain access to multiple *friend lists*, several individuals were asked to participate as *contributors*. The contributors were asked to encourage participation of their Facebook *friends* by sending an electronic link to the survey to their networks. Additionally, encouragement to spread the link to survey participants' *friends* was included in the effort. An ad placed on Facebook was also developed to gain additional responses from the college-level group.

Sample. The author identified several participants in the college-level and recent graduates' age group to participate in the development of the survey sample. These participants, all known to the author, are part of the Millennial Generation, and subscribe to the social networking Facebook site that was used to distribute the survey instrument. One participant is the author's daughter and the four other contributors are friends of the author. These participants communicate through their Facebook sites regularly and each claim to have between 400-900 *friends* on their sites.

The contributors who agreed to participate in the distribution of the survey each attend or have recently graduated from different colleges/universities, including: San Diego State University; California State University, Fullerton; Whittier College, and University of Arizona. The contributors also have contacts at colleges and universities all over California, the southwest and other areas of the United States. (See Chapter 1 for more comment on limitations and possible biases).

So the sample would not be limited to the friends of a few contributors, additional sources for survey distribution were desired. To gain additional respondents from outside the smaller group, the sample was expanded to include those responding to an ad placed

on Facebook at the same time of distribution to the contributors. With the potential response of over 4,000 possible contacts from the contributors' friend lists and an unlimited number of responses to the ad, there would be a sufficient sample size for the study.

The number of participants in the sample was determined with the use of a sample size calculator (Creative Research Systems, 2010). The size of the sample known was determined to be over 4,000 subjects (five contributors utilizing their Facebook friend lists ranging from 400-900 each). With a 95% confidence level and a confidence interval of 5, the sample size needed for the study was targeted at 351 responses. Because of the method chosen for the study, it was considered to be a "convenience sample" (Creswell, 2009, p. 155). Due to the fact that some members of the Millennial Generation could not be available for the sample, and, since this study used Facebook for implementation of the survey due to predetermined use by the population, the sample was not assigned randomly, but was based on availability. So, this was considered "nonprobability sampling" (Herek, 2009, para. 5) and the findings cannot "be generalized to the population" (para. 13).

Because of the high number of responses necessary for the sample size, additional steps to obtain the needed survey responses were taken (Israel, 2009). The ad placed on Facebook increased the probability of acquiring responses. Additionally, multiple reminders to the Facebook contributors were made and the ad extended, as necessary, for more responses. When the targeted number of responses was still not obtained with an increase in contact efforts, it was determined the results were to be generalized to those included in the survey only. Since the survey already was not generalized to the overall

population of the Millennial Generation, fewer responses were utilized to complete the study.

The actual responses were much different than planned, with two-thirds of the responses gained from the ad. So after 60 days, the survey was closed with 167 responses: 55 responses were received from the *friends* on Facebook; and 112 responses came from the ad. After filtering the responses for age and completeness, 106 final surveys were used for the results.

To be assured the responses came only from the age group desired, several measures were used to filter the ages. Because the ad placed on Facebook was only distributed to those in the 18-24 year old range, the responses were relegated to the appropriate age group for those responding to the ad. Those respondents sent the link though a *friend list* was not as controlled, but the content of the posting on Facebook asked the respondent to be in the age range (see Appendix G). Additionally, the welcome page of the survey stressed the survey taker agree to be in the 18-24 age range prior to moving into the question section. As a result, the actual responses were not completely verified, but it was relativity assured the group was self-reporting their age as well as the responses to the questions asked.

Instrumentation

To gather the desired data needed to address the research questions, a survey was conducted incorporating two survey instruments. The Scale of Attributes and Behaviors (SCAB) and the Student Leadership Profiles Inventory (SLPI) was included in the overall survey, however each area was scored separately to acquire the desired data.

Scale of Creative Attributes and Behavior. To be able to address the research hypothesis and understand the creativity/innovation skills of the Millennial Generation, the definition and perceived description of *creativity* needed to be explored. How did these students perceive their ability to work creatively? As discussed in Chapter 2, the following areas have been shown to cumulatively indicate creativity skills in students:

- creative engagement;
- creative cognitive style;
- spontaneity;
- tolerance; and
- fantasy. (Kelly & Kneipp, 2009, pp. 79-80)

These traits, measured in the Scale of Creative Attributes and Behavior (SCAB) was utilized to describe the creativity/innovative skills of the millennials in the study (see Appendix A). A discussion of how the survey results reported these qualities follows.

Each component of the SCAB used four questions to indicate the level of creativity in that dimension/variable. Table 3 outlines the questions and the description of the skill/abilities measured in each specific dimension/variable.

Developed as a way to identify "artistic vocational interests" (Kelly & Kneipp, 2009, p. 82), the SCAB measured five areas (identified in Table 3) of self-perceived creative ability. A seven-point Likert scale approach identified a pattern in individuals who showed positive accomplishments in a role involving creative tendencies. The reason for development of the measure was a belief that engagement and enjoyment in one's role leads to success. Those scoring higher on the SCAB indicated a tendency to enjoy creative endeavors and would possibly succeed in a creative work environment.

Because the SCAB indicated a self-perception of creativity, for this study, the results desired indicate the millennials see themselves as creative in their abilities.

Table 3

The Scale of Creative Attributes and Behavior

Scale/Dimension Variables	Description
Creative Engagement (Questions 1-4)	Enjoying creative activities and routinely spending time working on something creative
Creative Cognitive Style (Questions 5-8)	Cognitive aspects of creativity linked with intelligence – divergent thinking and problem solving
Spontaneity (Questions 9-12)	Style characterized by impulsivity and excitement seeking
Tolerance (Questions 12-16)	Attitude of flexibility and openness to ideas and experience
Fantasy (Questions 17-20)	Mental activity of creativity – daydreaming and imagination

Note. The information is this table is adapted from "You do what you are: The relationship between the Scale of Creative Attributes and Behavior and vocational interests," by Kathryn E. Kelly and Lee B. Kneipp, 2009, *Journal of Instructional Psychology*, pp. 79-83. Permission to use the Scale of Creative Attributes and Behavior instrument is included in Appendix B.

Scoring the results was done with the use of the Likert scale. The breakdown of the score indicated abilities within each dimension and overall ability as a total in all five dimensions. Kelly (2004) indicated questions 18 and 19 were reverse scored.

As the author of the SCAB indicated, the higher the score in the survey, the more creative tendencies were indicated (Kelly, 2009, p. 81). The original intent for scoring of the SCAB for this study utilized a combination of scores in each category. The scores within each dimension, a possible total score of 28, were to be combined to determine four levels of tendency for creativity: Creative (scores of 24-28 in Likert categories 6-Agree and 7-Strongly Agree); Creative Tendencies (scores of 20-23 in Likert category 5-Slightly Agree); Neutral (scores of 14-19 in Likert category 4-Neither Agree or Disagree); and Tendencies to Non-Creative (scores of 4-13 in Likert categories 1-3-

Strongly Disagree, Disagree and Slightly Disagree). A more statistically relevant way to determine the level of creativity was used instead with the use of scores equaling at least one standard deviation above the mean in the normative sample as the marker for more creative engagement. This would mean the 84th percentile of answers in the results would show a perception of creativity as self reported by the respondents. This method was also used in determining the creativity level in the program of study demographic.

Scoring each dimension separately generated data useful for each variable of creativity. The use of the SCAB for this study was determined to be valid through study of these traits as well as the documentation about the measurement tool reported by Kelly and Kneipp (2009). The tool was reported to "possess adequate internal consistency (α = .75 to .82) and test-retest reliability (.80, one month). Kelly also reported factor analysis that supported measurement of the five hypothesized components of creativity noted previously" (p. 81). Table 4 summarizes the findings to validate the tool using a sample of 115 psychology college students (87 female and 28 male) with a mean age of 25.3 years. "The majority of the sample (83%) identified themselves as White.

Table 4

SCAB Means, Standard Deviations, and Internal Consistencies of Scales

Scale/Component	Mean	Standard Deviation	Alpha
SCAB Total	92.4	16.2	.85
Creative Engagement (Questions 1-4)	15.6	5.9	.87
Creative Cognitive Style (Questions 5-8)	18.2	5.4	.87
Spontaneity (Questions 9-12)	17.4	5.1	.75
Tolerance (Questions 13-16)	21.1	3.6	.77
Fantasy (Questions 17-20)	20.1	4.6	.66

Note. The information is this table is adapted from "You do what you are: The relationship between the Scale of Creative Attributes and Behavior and vocational interests," by Kathryn E. Kelly and Lee B. Kneipp, 2009, *Journal of Instructional Psychology*, p. 79. Permission to use the Scale of Creative Attributes and Behavior instrument is included in Appendix B.

Additionally, other ethic groups were identified as 13% percent African American, 3% as 'Other,' and 2% as Native American" (p. 81). Permission to use the instrument for this study was obtained from Ms. Kelly (see Appendix B).

Table 5

The Student Leadership Practices Inventory

Inventory/Variables	Description
Model the Way (Questions 1, 6, 11, 16, 21, 26)	• Finding your voice by clarifying your personal values • Setting the example by aligning actions with shared values
Inspire a Shared Vision (Questions 2, 7, 12, 17, 22, 27)	• Envisioning the future by imagining exciting and ennobling possibilities • Enlisting others in a common vision by appealing to shared aspirations
Challenge the Process (Questions 3, 8, 13, 18, 23, 28)	• Searching for opportunities by seeking innovative ways to change, grow, and improve • Experimenting and taking risks by constantly generating small wins and learning from mistakes
Enable Others to Act (Questions 4, 9, 14, 19, 24, 29)	• Fostering collaboration by promoting cooperative goals and building trust • Strengthening others by sharing power and discretion
Encourage the Heart (Questions 5, 10, 15, 20, 25, 30)	• Recognizing contributions by showing appreciation for individual excellence • Celebrating the values and victories by creating a spirit of community

Note. The information is this table is adapted from "*Five Practices of Exemplary Student Leadership*," by James M. Kouzes and Barry Z. Posner, 2006, p. 10. Permission to use the Student Leadership Practices Inventory instrument is included in Appendices D and E.

Student Leadership Practices Inventory. The Student Leadership Practices Inventory (SLPI), modeled after the popular Leadership Practices Inventory (Kouzes & Posner, 1988), was created to assess potential leaders while they are still students. Developed in 1995, and revised as an online tool in 2007, the SLPI had recently documented testing for reliability and validity. In February 2010, the results of a two-year sampling of students who took the inventory were published (see Table 6). Of the sample size of 8,208 students, 25% agreed to be a part of the study, which took place from

August 2007 to August 2009. Of the students who responded, 62.3% reported to be between the ages of 18-27 and 52.6% were enrolled undergrads in college and 17.4% were college graduates/grad students. The inventory was predominantly female with over 62% and male 38%. The ethnic breakdown of the sample showed over 67% White/Caucasian; Asian the next largest ethnic group at 10.3% with Black and Hispanic groups about 8% each. Over half of the responders were natives or residents of the United States leaving 41% to be from outside of the U.S.

Table 6

SLPI Means, Standard Deviations, and Internal Consistencies of Scales

SLPI Inventory/Variables	Mean	Standard Deviation	Alpha
Model the Way (Questions 1, 6, 11, 16, 21, 26)	22.41	4.17	.69
Inspire a Shared Vision (Questions 2, 7, 12, 17, 22, 27)	22.09	4.67	.79
Challenge the Process (Questions 3, 8, 13, 18, 23, 28)	22.10	4.41	.73
Enable Others to Act (Questions 4, 9, 14, 19, 24, 29)	24.41	3.72	.68
Encourage the Heart (Questions 5, 10, 15, 20, 25, 30)	23.04	4.52	.79

Note. Table adapted from "Psychometric properties of the Student Leadership Practices Inventory" by Barry Z. Posner, 2010, p. 9. Permission to use the Student Leadership Practices Inventory instrument is included in Appendices D and E.

Aside from just self-reported scores, the Student Leadership Practices Inventory was designed to also offer feedback from observers who rate the leadership abilities shown by the students' interactions. However, for this study, the self-identified ratings were the focus to align with the self-reported creativity skills reported in the SCAB. The inventory (see Appendix C) was rated on a five-point Likert scale, divided into five categories: Model the Way; Inspire a Shared Vision; Challenge the Process; Enable Others to Act; and Encourage the Heart. These individual areas were totaled (ranging from 6-30) and compared to the overall percentages of over 2,200 students. The

individual attribute's score allowed students to identify where to focus to improve their leadership abilities. The scores show High, Moderate or Low ratings for each item in the inventory (see Table 7). By identifying where their strengths and areas of improvement are, the student is able to work on specific areas to improve their leadership skills.

Table 7

SLPI Inventory Scores

SLPI Scores Overall	High	Moderate	Low
Model the Way (Questions 1, 6, 11, 16, 21, 26)	25-30	21-24	17-20
Inspire a Shared Vision (Questions 2, 7, 12, 17, 22, 27)	24-30	19-23	14-18
Challenge the Process (Questions 3, 8, 13, 18, 23, 28)	24-30	19-23	14-18
Enable Others to Act (Questions 4, 9, 14, 19, 24, 29)	26-30	23-25	18-22
Encourage the Heart (Questions 5, 10, 15, 20, 25, 30)	26-30	22-25	17-21

Note. The information is this table is adapted from "*Student Leadership Practices Inventory: Student Workbook*," by James M. Kouzes and Barry Z. Posner, 2006, pp. 19-22. Permission to use the Student Leadership Practices Inventory instrument is included in Appendices D and E.

Implementation Plan

The Facebook contributors (five total) were asked to post a statement on their Facebook site as well as send out a message to each of their friends to take the creativity/leadership survey (see Appendix F for scripts). The survey was housed on the online survey website, SurveyMonkey, with a link provided to the Facebook respondents for their participation. A participant clicked on a link that took them to the survey that contained the SCAB/SLPI instruments. The survey was filtered so that only those 18 years to 24 years responded, and the results were tabulated from their scores. An ad on Facebook was also created to attract more participation by the age group. And, the participants were encouraged to send the link to the survey to their friend lists.

Since the accounts on Facebook contain many sources, the sample size of participants logging in through the site to SurveyMonkey was unpredictable, however,

the contributors agreed to send periodic notices (see Appendix F) to keep the network active until the desired number of surveys were received.

Analysis of the Data

The data gathered and scored was utilized to answer the Research Questions, outlined in Chapter 1 as follows:

1. To what extent, if at all, do college-level members of the Millennial Generation perceive themselves as creative?
2. To what extent, if at all, are there differences in the creativity of college-level members of the Millennial Generation with regard to select demographics?
3. To what extent, if at all, is there a relationship between creativity and leadership potential among college-level members of the Millennial Generation?

Basic demographic information was included to understand whom the sample represents; number of responses, age group, gender, level of college experience, program of study, and college attended. Additionally, these responses were required to correlate the variable data with the demographic information to better analyze the perceived creativity/leadership skills.

Initial descriptive methods were used to determine mean and mode scores for each dimension/variable as well as the overall mean and mode scores from the data received. Tables of data were used to analyze all scores.

Response bias was hard to determine due to the anonymity and undetermined nature of the responses, however due to the online responses, no noticeable biases were determined. There was a notion there could be discussion among the Facebook *friends*, but this was not evident during the time the survey was active.

After descriptive analysis of the sample data, statistical tests using inferential information were used. Results were gathered from the SurveyMonkey survey site source. All tests were run using SPSS Statistical Software and/or the Microsoft Excel program.

A list of descriptive elements to be conducted include:

- Percentage of sample by age (to determine qualification as a millennial and further define the sample group)—Research Question 2—mean and standard deviation determination
- Percentage of male versus female—Research Question 2—mean and standard deviation determination
- College level—Research Question 2—mean and standard deviation determination
- Program of study—Research Question 2—mean and standard deviation determination
- Description of responses of each question—Research Question 2—mean and standard deviation determination
- Description of responses by dimension/independent variable—Research Question 2—mean and standard deviation determination for each of the five dimension/independent variables in both the SCAB and the SLPI
- Description of responses to overall surveys (determination of dependent variable of creativity)—Research Question 2—mean and standard deviation determination

A list of inferential stats tests to be conducted include:

- Correlation of overall creativity (dependent variable to each dimension/independent variable)—Research Question 1—Correlation coefficient – Pearson
- Correlation of creativity in males versus females—Research Question 1—Correlation coefficient – Pearson
- Correlation of creativity by college level (more experience in learning could show a higher level of creativity)—Research Question 1—Correlation coefficient—Pearson
- Correlation of creativity by program of study (could show tendencies of programs lead to higher creativity skills and job needs in the future)—Research Question 1—Correlation coefficient—Pearson
- Correlation of overall creativity to perceived leadership ability—Research Question 3—Correlation coefficient—Pearson
- Correlation of creativity in males versus females as related to perceived leadership ability—Research Question 3—Correlation coefficient—Pearson
- Correlation of creativity by college level as related to perceived leadership ability—Research Question 3—Correlation coefficient—Pearson
- Correlation of creativity by program of study as related to perceived leadership ability—Research Question 3—Correlation coefficient—Pearson

Data was included in the results as tables to show significant indicators of answers to the research questions.

Summary

If creative tendencies are desired in employees, college students from the Millennial Generation are now entering the workforce and their abilities will be vital to sustain a strong economy. The challenges indicative of their unique outlook on life will impact how successful they will be in their roles. The organizations employing these individuals will need to motivate and stimulate them in their roles to retain them (Orrell, 2007). And, more information about their additional skill requirements will be helpful to support them in their roles, now and in the future:

> It is probably true that in a system that is conducive to creativity, a person whose thinking is fluent, flexible and original is more likely to come up with novel ideas. Therefore, it makes sense to cultivate divergent thinking in laboratories and corporations – especially if management is able to pick out and implement the most appropriate ideas from the many that are generated. (Csikszentmihalyi, 1996, p. 60)

Chapter 4. Research Results

The research survey entitled, *Innovation, Creativity and Leadership Skills in College-Aged Millennials*, was launched using two different collection devices, both based on the Facebook social network site. The first collection device was connected to a link sent to *friends* through Facebook's network. The surveys collected through this collection devise garnered 55 responses. The second collector counted the number of responses to an ad placed on Facebook, targeting 18-24 year olds. Additionally, the replies to the ad were counted in the Facebook account, which garnered 112 survey responses (from 3,329 actual clicks to the ad link). The survey was available for 60 days collecting responses into the SurveyMonkey survey site. From the two collectors, there were 167 total responses of which 25% of the responses came from friends on Facebook and 75% were responses to the ad. The final useable, complete surveys filtered by age totaled 106.

In Chapter 3, the goal was to gain a response of 351 participants. This number was determined with the use of a sample size calculator. The responses were to be generated from a population of college-level Millennial Generation individuals who were connected via the Facebook social media site. Additionally there was an ad placed on Facebook to generate more respondents who were not part of the original network. However, due to the overwhelming response from the ad, more responses were collected from the ad, giving a more diverse response than originally intended. The responses from the friend lists did not generate as many responses as previously calculated. Therefore, the final sample size was smaller due to the changes in the responses generated.

The survey utilized for this study was itself broken into three sections. The first section dealt with the description of those taking the survey; indicating their age, gender, college or university, and the program of study in which they were enrolled. The next two sections asked the survey taker to respond to questions in two areas: creativity and innovation tendencies and leadership ability.

The Scale of Creative Attributes and Behavior (SCAB) was utilized for the section targeting creativity and innovation tendencies. The leadership skills section utilized the Student Leadership Practices Inventory (SLPI) (see Appendix A for the SCAB instrument and Appendix C for SLPI).

Description of Survey Respondents

The survey was restricted to only 18-24 years old: college-aged students and recent graduates. Tracking for results by age, gender, university/college and program of study were gathered. In the results herein, the total number of usable responses is utilized (106). The results are not broken down by collection method. This section describes the frequency of responses for those categories.

Table 8 displays the frequency counts for selected variables. Ages of the 106 respondents ranged from 18-24 years old ($M = 21.37$, $SD = 2.13$). Sixty-six percent of the sample was female. The most common programs of study were business/ communications (26%), psychology/sociology (16%) and sciences/medical (14%). The level of college achieved ranged from “none (6%)” to “graduate (24%)” with the median amount of education being “sophomore.”

Table 8

Frequency of Responses for Selected Variables (N=106)

Variable	Category	*n*	%
Reported Age			
	18	17	16%
	19	11	10%
	20	10	9%
	21	6	6%
	22	22	21%
	23	20	19%
	24	20	19%
Gender			
	Male	36	34%
	Female	70	66%
Program of Study			
	Arts/Creative Programs	14	13%
	Business/Communications	27	26%
	Engineering	9	9%
	Government/Political Science	5	5%
	Liberal Arts/Humanities	14	13%
	Psychology/Sociology	17	16%
	Sciences/Medical	15	14%
	Other	5	5%
Level of College Achieved			
	None	6	6%
	Freshman	23	22%
	Sophomore	25	24%
	Junior	8	8%
	Senior	19	18%
	Graduate	25	24%

Description of responses by institution and region represented. The responses by university or college attended were the most widespread of all the results studied. Since the ad on Facebook targeted 18-24 year olds across the United States, there were a good variety of institutions represented in the results: 73 institutions were represented in the 106 responses received. San Diego State University showed the most responses,

probably due to the author's friends from Facebook who responded to the survey (14% of overall responses). Several other California state colleges and universities were represented, making up 58% of the responses to the survey. Universities and colleges outside California made up 42% of the responses (see Appendix H for a complete list of institutions represented in the responses).

Comparison of Survey Responses

Mean scores by scale were determined for both the SCAB and the SLPI instruments. Scale means were compared to the means of the normative samples and within each instrument. Additionally, individual questions defining creativity were examined to determine mean and ranking by the mean scores.

Overall results for the Scale of Creative Attributes and Behavior. The overall evaluation of creativity, resulting from the SCAB portion of the *Innovation, Creativity and Leadership Skills in College-Aged Millennials* survey, is shown in the self-reported responses of the respondents by their perceptions of their own skills about creativity. The Scale of Creative Attributes and Behavior utilizes five scales, each containing four questions to determine the score in that scale.

Table 9 displays the comparison of the SCAB scores from the Kelly and Kneipp (2009) study with the mean scores from the current sample. Inspection of Table 9 found the current sample respondents to have higher means for all six-scale scores. All six *t* test comparisons were significant at the $p = .001$ level. The largest difference was for Creative Engagement ($M = 15.6$ versus $M = 21.34$).

Table 9

Comparisons of Scale of Creative Attitudes and Behavior Mean Scores by Scale from the Kelly & Kneipp (2009) Study and the Current Study (N=106)

	Kelly & Kneipp (*N* = 115)	Current Study (*N* = 106)			
	M	*M*	*SD*	*t*	*p*
Creative Engagement (Questions 1-4)	15.6	21.34	5.02	11.8	.001
Creative Cognitive Style (Questions 5-8)	18.2	22.81	3.78	12.6	.001
Spontaneity (Questions 9-12)	17.4	19.81	5.13	4.84	.001
Tolerance (Questions 13-16)	21.1	23.35	3.78	6.13	.001
Fantasy (Questions 17-20)	20.1	22.32	3.98	5.74	.001
Total (Questions 1 – 30)	92.4	109.63	14.44	12.3	.001

Note. All show significance.

The data from the Kelly & Kneipp study in this table is adapted from "You do what you are: The relationship between the Scale of Creative Attributes and Behavior and vocational interests," by Kathryn E. Kelly and Lee B. Kneipp, 2009, *Journal of Instructional Psychology*, p. 80. Permission to use the Scale of Creative Attributes and Behavior instrument is included in Appendix B.

To determine if a respondent was considered creative, the measurement of one standard deviation above the mean in the normative sample, or the 84th percentile, was used (See Table 9, above, for the normative sample results). Table 10 shows the frequency and percentages of those respondents who perceive themselves more creative than one standard deviation above the norm sample. By this methodology, for the total

Table 10

Percentages of Respondents Who Consider Themselves to be Creative By Scale Score

Scale	Frequency	Percentage
Creative Engagement	61	58%
Creative Cognitive Style	52	49%
Spontaneity	38	36%
Tolerance	41	39%
Fantasy	39	37%
Total - Scale of Creative Attitudes & Behaviors	57	54%

Note. Adapted from Kelly and Kneipp (2009, p. 80).

SCAB score, 54% of the respondents were determined to be creative by their responses. For the five scale scores, the highest percentage of respondents who were creative were in the scale of creative engagement (58%) while the lowest percentage of creative respondents was for spontaneity (36%).

Overall results for the Student Leadership Practices Inventory. Table 11 displays the comparison of Student Leadership Practices Inventory (SLPI) mean scores from the Posner (2010) study and the current study. Inspection of the table found the means for the scale scores to be similar.

Table 11

Comparison of Student Leadership Practices Inventory (SLPI) Mean Scores by Scale from Posner (2010) and Current Study (N=106)

	Posner (2010) (*N* = 8208)	Current Study (*N* = 106)	
SLPI Scales	*M*	*M*	*SD*
Model the Way (Questions 1, 6, 11, 16, 21, 26)	22.41	22.62	4.26
Inspire a Shared Vision (Questions 2, 7, 12, 17, 22, 27)	22.09	22.98	3.94
Challenge the Process (Questions 3, 8, 13, 18, 23, 28)	22.10	22.34	4.57
Enable Others to Act (Questions 4, 9, 14, 19, 24, 29)	24.41	23.95	4.02
Encourage the Heart (Questions 5, 10, 15, 20, 25, 30)	23.04	23.85	4.45
Total (Questions 1 – 30)		115.75	18.78

Note. Table adapted from "Psychometric properties of the Student Leadership Practices Inventory" by Barry Z. Posner, 2010, p. 9. Permission to use the Student Leadership Practices Inventory instrument is included in Appendices D and E.

Data Analysis and Survey Results for Research Question 1

Research Question 1 asks, "To what extent, if at all, do college-level members of the Millennial Generation perceive themselves as creative?" To answer this question, the mean scores for the SCAB scales and the total scores in the normative and current samples were compared (Table 9). The highest mean, and the greatest measure of significance occurred in Creative Cognitive Style. However the scale of Spontaneity

showed the lowest mean score and significance. For the measurement of one standard deviation above the mean in the normative sample, the highest percentage of those deemed creative occurred in the scale of Creative Engagement and the lowest appeared in the scale of Spontaneity (Table 10).

Table 12

Mean Responses for the Scale of Creative Attitudes & Behavior Individual Items Sorted by the Highest Mean Score (N=106)

Item		Component	*M*	*SD*
14.	I like new ideas.	Tolerance	6.09	1.07
20.	I like to imagine going to new places.	Fantasy	6.08	1.19
3.	I enjoy creating new things.	Creative Engagement	5.94	1.18
16.	I am accepting of other people's ideas.	Tolerance	5.90	1.07
17.	I often fantasize.	Fantasy	5.89	1.21
5.	I am often able to see the "big picture" where others can't.	Creative Cognitive Style	5.86	1.19
6.	I am often able to make connections between seemingly unrelated things or situations.	Creative Cognitive Style	5.78	1.18
15.	I am very tolerant of other people.	Tolerance	5.71	1.39
13.	I am flexible in my thinking.	Tolerance	5.65	1.26
8.	When someone asks me to solve a difficult problem, I can usually find creative solutions.	Creative Cognitive Style	5.61	1.17
7.	I have an ability to find the hidden potential of ideas that others often can't see.	Creative Cognitive Style	5.56	1.25
2.	I dabble in many different hobbies.	Creative Engagement	5.54	1.38
19.	I would have difficulty just letting my mind wander.	Fantasy	5.50	1.59
10.	I am very spontaneous.	Spontaneity	5.28	1.55
1.	I spend much of my time creating things	Creative Engagement	5.05	1.60
9.	I am somewhat mischievous.	Spontaneity	5.01	1.76
18.	I don't like to waste my time daydreaming.	Fantasy	4.86	1.73
12.	I am a "risk taker."	Spontaneity	4.81	1.65
4.	I work on some type of creative project on a daily basis.	Creative Engagement	4.81	1.79
11.	I am impulsive.	Spontaneity	4.71	1.74

Note. Ratings were based on a 7-point Likert scale (1 = *Strongly Disagree* to 7 = *Strongly Agree*). Item numbers 18 and 19 are reverse scored, so for these two items, (7 = *Strongly Disagree* to 1 = *Strongly Agree*). (Kelly & Kneipp, 2009).

To further examine this question, the mean responses for the SCAB individual items (Table 12), sorted by the highest mean score, were reviewed. These ratings were based on a 7-point Likert scale (1 = *Strongly Disagree* to 7 = *Strongly Agree*). Highest agreement was for Item 14, "I like new ideas (M = 6.09)" and Item 20, "I like to imagine going to new places (M = 6.08)." In contrast, the lowest levels of agreement were for Item 11, "I am impulsive (M = 4.71)," Item 4, "I work on some type of creative project on a daily basis (M = 4.81)," and Item 12, "I am a 'risk-taker' (M = 4.81)" (Kelly & Kneipp, 2009).

Data Analysis and Survey Results for Research Question 2

Research Question 2 asked, "To what extent, if at all, are there differences in the creativity of college-level members of the Millennial Generation with regard to select demographics?" This question was answered for the respondent's program of study

Table 13

Association of Program of Study with Total Self-Perception of Creativity (N = 106)

	Less Creative		More Creative	
Program	*n*	%	*n*	%
Arts/Creative Programs	4	29%	10	71%
Business/Communications	12	44%	15	56%
Engineering/Math	3	33%	6	67%
Government/Political Science	2	40%	3	60%
Liberal Arts/Humanities	5	36%	9	64%
Psychology/Sociology	11	65%	6	35%
Sciences/Medical	11	73%	4	27%
Other	1	20%	4	80%
Total	49	46%	57	54%

Note. χ^2 (7, N = 107) = 11.25, p = .13. Cramer's V = .33.

(Table 13) as well as their gender, education and whether the respondent was in one of the arts/creative programs (Table 14). Both tables used the measurement of one standard deviation above the mean in the normative sample as the indication of creativity.

Table 13 displays the results of the chi-square test comparing the respondent's program of study with their total self-perception of creativity score. The overall test was not significant, χ^2 (7, N = 107) = 11.25, p = .13, Cramer's V = .33. Inspection of the table found respondents in the arts/creative programs to have the highest percentage of creative individuals (71%) while sciences/medical (27%) and psychology/sociology (35%) to have the least self-perceived creative individuals.

To further examine Research Question 2, Table 14 displays the results of the Pearson correlations for the six scale scores with the respondent's gender, level of education and whether they were in a creative/arts program. The respondent's gender was significantly related to one of the measures of creativity: Female respondents had higher scores for the tolerance scale (r = .30, p < .005). Respondents in a creative or arts

Table 14

Correlation of Responses by Scale for Creativity and Selected Demographics (N=106)

Item	Gender [a]	Level of Education	Creative/Arts Programs [b]
Creative Engagement (Questions 1-4)	-.01	.13	.20 *
Creative Cognitive Style (Questions 5-8)	-.08	.08	.07
Spontaneity (Questions 9-12)	-.13	-.04	.02
Tolerance (Questions 13-16)	.30 ***	.10	.02
Fantasy (Questions 17-20)	.16	-.03	.13
Total Creativity (SCAB)	.05	.07	.14

Note. * p < .05. *** p < .005.

[a] Gender: 1 = *Male* 2 = *Female*.

[b] Coding: 0 = *No* 1 = *Yes*.

Adapted from Kelly and Kneipp (2009).

program had significantly higher levels of agreement with 1 of the creativity scores. Specifically, students in creative/arts programs had higher scores for Creative Engagement ($r = .20$, $p < .05$).

Table 15

Correlation of Responses by Item for Creativity and Selected Demographics (N=106)

Item		Gender [a]	Level of Education	Creative/Arts Programs [b]
1.	I spend much of my time creating things	-.02	.07	.22 *
2.	I dabble in many different hobbies.	.01	.11	.09
3.	I enjoy creating new things.	.03	.27 ***	.11
4.	I work on some type of creative project on a daily basis.	-.04	.04	.23 *
5.	I am often able to see the "big picture" where others can't.	-.09	.01	.14
6.	I am often able to make connections between seemingly unrelated things or situations.	-.08	-.01	-.02
7.	I have an ability to find the hidden potential of ideas that others often can't see.	-.08	.06	.09
8.	When someone asks me to solve a difficult problem, I can usually find creative solutions.	.00	.20 *	.01
9.	I am somewhat mischievous.	-.10	.06	.09
10.	I am very spontaneous.	-.13	-.06	.00
11.	I am impulsive.	-.04	-.18	-.03
12.	I am a "risk taker."	-.14	.07	-.01
13.	I am flexible in my thinking.	.21 *	.06	-.05
14.	I like new ideas.	.21 *	.11	.07
15.	I am very tolerant of other people.	.31 ****	.08	.00
16.	I am accepting of other people's ideas.	.19 *	.08	.04
17.	I often fantasize.	.07	.06	.13
18.	I don't like to waste my time daydreaming.	.16	-.09	.00
19.	I would have difficulty just letting my mind wander.	.14	-.07	.14
20.	I like to imagine going to new places.	.05	.08	.12

Note. * $p < .05$. *** $p < .005$. **** $p < .001$.

[a] Gender: 1 = *Male* 2 = *Female*.

[b] Coding: 0 = *No* 1 = *Yes*.

Adapted from Kelly and Kneipp (2009).

Table 15 displays the results of the Pearson correlations for the 20 individual items of the SCAB with the respondent's gender, level of education and whether they were in a creative/arts program. The respondent's gender was significantly related to 4 of 20 measures of creativity. For the largest correlations, female respondents had higher scores for Item 15, "I am very tolerant of other people" ($r = .31$, $p < .001$). The respondent's level of education was found to have significant positive correlations with 2 of 20 creative scores. Specifically, those with higher levels of education had significantly more agreement with Item 3, "I enjoy creating new things" ($r = .27$, $p < .005$) and Item 8. "When someone asks me to solve a difficult problem, I can usually find creative solutions" ($r = .20$, $p < .05$). Respondents in a creative/arts program had significantly higher levels of agreement with 2 of 20 creativity scores: Creative/arts students had higher scores for Item 1, "I spend much of my time creating things" ($r = .22$, $p < .05$), and Item 4, "I work on some type of creative project on a daily basis" ($r = .21$, $p < .05$) (Kelly & Kneipp, 2009).

Data Analysis and Survey Results for Research Question 3

Research Question 3 asked, "To what extent, if at all, is there a relationship between creativity and leadership potential among college-level members of the

Table 16

Correlation of Responses by Scale for Creativity and Overall Leadership (N=106)

Item	Total Leadership
Creative Engagement (Questions 1-4)	.07
Creative Cognitive Style (Questions 5-8)	.13
Spontaneity (Questions 9-12)	.01
Tolerance (Questions 13-16)	-.12
Fantasy (Questions 17-20)	.03
Total Creativity (SCAB)	.04

Note: No significance.

Adapted from Kelly & Kneipp (2009).

Millennial Generation?" To answer this question, Table 16 displays the results of the Pearson correlations between the respondent's total leadership score and 6 measures of creativity as shown in the scale scores, which indicated no measures of significance.

Table 17 displays the results of the Pearson correlations between the respondent's total leadership score and 20 measures of creativity as outlined in the individual items. Only 1 of 20 correlations was significant: the respondent's total leadership score had a

Table 17

Correlation of Responses by Item for Creativity and Overall Leadership (N=106)

Item	Total Leadership
1. I spend much of my time creating things	.11
2. I dabble in many different hobbies.	.05
3. I enjoy creating new things.	.00
4. I work on some type of creative project on a daily basis.	.06
5. I am often able to see the "big picture" where others can't.	.00
6. I am often able to make connections between seemingly unrelated things or situations.	.10
7. I have an ability to find the hidden potential of ideas that others often can't see.	.13
8. When someone asks me to solve a difficult problem, I can usually find creative solutions.	.18
9. I am somewhat mischievous.	.09
10. I am very spontaneous.	.08
11. I am impulsive.	-.06
12. I am a "risk taker."	-.06
13. I am flexible in my thinking.	-.02
14. I like new ideas.	-.03
15. I am very tolerant of other people.	-.20 *
16. I am accepting of other people's ideas.	-.12
17. I often fantasize.	-.03
18. I don't like to waste my time daydreaming.	-.04
19. I would have difficulty just letting my mind wander.	.03
20. I like to imagine going to new places.	.16

Note. * $p < .05$.

Adapted from Kelly and Kneipp (2009).

significant negative correlation with Item 15, "I am very tolerant of other people" ($r =$ -.20, $p < .05$) (Kelly & Kneipp, 2009). As an additional approach to answering this question, the six leadership scale scores were correlated with the six creative scale scores. For the resulting 36 correlations only one was significant (no table shown). Specifically, the respondent's Creative Cognitive Style score was positively correlated with the Inspire a Shared Vision score ($r = .20$, $p < .05$).

Additional Findings

As an additional analysis, Table 18 displays the results of the Pearson correlations for the six scale scores of leadership with the respondent's gender, level of education and age. Not necessary to answer the research questions, but part of the data gathered and relevant in the literature, level of education and age showed significance in two scales and in age overall.

Table 18

Correlation of Responses by Scale for Leadership and Selected Demographics (N=106)

Item	Gender [a]	Level of Education	Age
Model the Way (Questions 1, 6, 11, 16, 21, 26)	.02	.22 *	.21 *
Inspire a Shared Vision (Questions 2, 7, 12, 17, 22, 27)	-.15	.25 *	.28 *
Challenge the Process (Questions 3, 8, 13, 18, 23, 28)	.08	.18	.15
Enable Others to Act (Questions 4, 9, 14, 19, 24, 29)	-.06	.04	.12
Encourage the Heart (Questions 5, 10, 15, 20, 25, 30)	-.05	.08	.14
Total SLPI (Questions 1 – 30)	-.03	.17	.20 *

Note. * $p < .05$.

[a] Gender: 1 = *Male* 2 = *Female*.

Adapted from Kouzes and Posner (2006).

Specifically, there was a significant correlation with leadership for higher levels of education in the scales, "model the way ($r = .22$, $p < .05$)" and "inspire a shared vision ($r =$ .25, $p < .05$). Closely related, age had significantly higher levels of agreement with total

leadership ($r = .20$, $p < .05$). Additionally, age also had significance with leadership for the scales of "model the way ($r = .21$, $p < .05$)" and "inspire a shared vision ($r = .28$, $p < .05$).

Summary

For the 106 respondents to the survey, *Innovation, Creativity and Leadership Skills in College-Aged Millennials*, the findings were not conclusive for indications of creativity or finding relationships between creativity and leadership. For the statistically significant items, the levels of significance were low, so were not necessarily relevant. In the overall study, 66 % of the sample was female with a mean age of 21.37 ($SD = 2.13$). The business/communication programs were the most represented at a rank of sophomore as the mean level of education (Table 8).

For the measure of creativity, the scale scores overall were higher than the mean scale scores for the SCAB normative sample, with the largest difference being for the scale of creative engagement (Table 9). Overall leadership scores compared similarly with the SLPI normative sample (Table 11). For the individual items scored in the SCAB instrument, the highest ranked scores, and the only two scoring a "6 = *Agree*," were "I like new ideas" and "I like to imagine going to new places" (Table 10). Conversely, the three lowest scoring items were "I am impulsive;" "I work on some type of creative project on a daily basis;" and "I am a 'risk-taker'" (Table 10) (Kelly & Kneipp, 2009).

Approximately half of the respondents felt they were creative (Research Question 1). The highest scores for creativity were in the scales of creative engagement and the lowest percentage was for spontaneity (Table 12).

To find demographics that indicated creativity (Research Question 2), females more than males showed more tolerance of others, those with a higher level of education

felt more comfortable in creative problem solving, and those in creative/arts programs spent more time in creative activities (Tables 14 and 15).

To determine if levels of creativity indicated leadership tendencies (Research Question 3), significance was found in the area of tolerance, and higher levels of creative cognitive style was correlated with inspiring a shared vision. Additionally, predictions of creativity were not indicated with the variables measured, but more leadership ability was indicated for the older respondents and those with higher levels of education. A discussion of these findings and comparisons to the relevant literature follows.

Chapter 5. Discussion of the Findings

Prologue

In a challenging time for the economy of the country, as well as globally, those organizations whose employees think and act in a creative/innovative fashion will more than likely survive, thrive and compete at a higher level than those who do not (Florida, 2010). And even more advantageous, those organizations that integrate multi-generations into a dynamic workforce will see more creativity and innovation within their organizations (Meister & Willyerd, 2010; Zemke et al., 2000). Leadership at all levels of the organization will be needed to forge a path in the new Conceptual Age (Pink, 2005a). This study helped illuminate these principles.

Restatement of purpose. The intention of this study was to examine creativity as a self-perceived aspect in the college-aged Millennial Generation. Furthermore, predictable characteristics of those who think of themselves as creative were explored. And finally, aspects of leadership and creativity in this group were observed.

This study examined the areas above using the following Research Questions:

1. To what extent, if at all, do college-level members of the Millennial Generation perceive themselves as creative?
2. To what extent, if at all, are there differences in the creativity of college-level members of the Millennial Generation with regard to select demographics?
3. To what extent, if at all, is there a relationship between creativity and leadership potential among college-level members of the Millennial Generation?

Highlights of research findings. To answer the specific research questions, the study produced some significant, although not overwhelming results. Overall, for the

self-perceptions pertaining to creativity skills, the area of tolerance and appreciation of new ideas rated the highest and the skills associated with the impulsive and risk-taking behaviors garnered the lowest scores. For the overall leadership self-perceptions, teamwork was highlighted while inspiring others ranked the lowest. These elements are consistent with the outlined traits of the Millennial Generation (Howe & Strauss, 2003).

While the majority of the respondents considered themselves creative, those whose education was in art or creative-type programs were more inclined to spend their time engaged daily in creative projects. Females showed more tolerance of others and remained flexible in their thinking while relishing new ideas. Those with a higher level of education also enjoyed working on creative projects as well as being able to find solutions to creative problems. Even though there was no significant correlation between creativity and leadership skills, specific areas that did have some significance were tolerance of others and the level of education and/or age having more ability to inspire others and model behaviors desired. These items reflect areas of the literature identified as part of the study.

Comparison of Findings with Relevant Literature

The findings of the study both agree and disagree with areas indicated in the literature reviewed in Chapter 2. Overall, aspects of the respondents indicating a supportive attitude with authors on creativity or leadership aspects of the Millennial Generation include the following:

- They are tolerant of others.
- They are flexible in their thinking.
- They like new ideas.

- Females more than males tended to have higher scores for tolerance, flexible thinking and liking new ideas.
- They expect to work as a member of a team.
- For those with higher education levels, they spend more time on creative projects and are adept at solving problems creatively. However, time on task is minimal.
- They are risk-adverse.

Those aspects that are not supported in the literature include:

- Risk-taking is indicated as vital by some of the literature.
- They do not have impulsive qualities.
- More than half of the group felt they were creative. But, the data shows the group enjoys creating new things.
- There is no mention in the literature indicating the millennials desire to travel to new places. However in a global society, this becomes important.

Literature in agreement with the findings. Richard Florida (2004) predicts three areas necessary "for creativity in the workplace: technology, talent and tolerance" (p. 292). Not only is the group studied masters of various technological devices, but also they indicated in the survey they were tolerant of others and flexible in their thinking. Florida (2005) also suggests the need to "go out of their way to be open and inclusive, and the place most likely to mobilize the creative talents of their people are those that don't just tolerate differences but are *proactively inclusive*" (pp. 38-39). Not only in the SCAB, but also again in the SLPI (indicating leadership abilities especially in females), tolerance in the workplace seems likely for this group. Other authors indicating a need for

tolerance and flexibility include Chowcat (2002), Gardner (2007), Goldsmith et al., (2003), Howe and Strauss (2000, 2003), Orrell (2008), Strauss and Howe (1991,1997), and Zemke, Raines, and Filipczak (2000).

The production of new ideas is also necessary in a creative environment. Those in the literature who indicate millennials appreciate new ideas include Gardner (2007), Florida (2010), and Runco (2003). Runco defines creativity as "any thinking or problem solving that involves the construction of new meaning" (p. 318). And Gardner suggests, "the *creating mind* looks to the future to bring about new ideas and new ways of thinking" (p. 3). Again, according to the data, females were more adept at these skills in both the creative and leadership aspects of the survey. Florida agrees major challenges are facing the country and "knowledge, creativity, and ideas" (p. 111) will be required to solve the problems at hand.

The larger number of females participating in this study is not surprising. They seem more engaged, especially on the educational front. Strauss and Howe (2003) suggests females will continue taking the lead in academic achievement with females venturing into more professional fields. More likely to attend, persist and complete college, women will move on to earn more doctorates and professional-level degrees than males. Men, however, are not expected to remain in the wings. As the generation ages, this balance could adjust, but Millennial Generation women are on the path to play larger roles in the workforce than they have traditionally (Florida, 2010).

Teamwork is a description used often in relation to the abilities of the Millennial Generation. Robinson (2001) indicates the creative process is not so individual, needing the support of others. Problems are solved more readily in a group or team setting.

Gardner (2007) agrees, “working with people in appreciative and responsible ways” (p. 3) is necessary to get the creative juices flowing. Howe and Strauss (2000, 2003) identifies team orientation as one of seven characteristics defining the skills of the millennials. Others agreeing teamwork is a necessary skill include Goldsmith et al., (2003), Orrell (2008), and Pasieka (2009).

Even though the data indicates a lower score for spending time on creative projects, those with a higher level of education scored higher and indicated an ability to be able to solve creative problems. Paulo Freire (1993) agrees an “engagement of the student in creative thought as the way to eliminate the depositing process” (p. 84) thus allowing the student to come up with more creative solutions. Time-on-task is necessary to focus abilities. Gardner (2007) agrees it takes commitment to master one’s skills and techniques. Furthermore, integrating and analyzing information is essential in bringing an idea to fruition.

Time spent engaged in creativity and innovation by individuals to develop their talent and skills is supported by the literature (Robinson, 2001; Runco, 2007). However, time spent on creative tasks scored toward the bottom of the study. Additionally, to be able to compete on a global scale, organizations need to invest in and develop creativity and innovation (Zakaria, 2008). Furthermore, time devoted to creative skill development has been interrupted for this generation of students in elementary and secondary schools due to the No Child Left Behind (2001) legislation, which could explain the minimal time spent on creative endeavors as indicated in the survey. Robinson (2001) suggests that education sector as well as other organizations will need to reinforce creativity if this generation is going to be able to compete in a global society.

One of the resounding areas of the study indicated this group did not take risks nor thought of themselves as impulsive. These both scored among the lowest of all questions asked in the SCAB portion of the survey. Howe and Strauss (2003) indicated the Millennials have been "sheltered" as well as "pressured" and had a desire to achieve (pp. 51-52). Because their parents protected them and tried to avoid any harm, the group has not experienced failures as youth in the past have. As well, teaching-to-the-test has been a factor in the lack of creative development of this group. The pressure to achieve great things also keeps the desire to avoid failure alive for this group, possibly finding the quick rewards or path of less resistance in their efforts. Creativity, then, also does not fully develop due to the fear of possible failure. This trait, as Howe and Straus point out, creates a "tendency toward safety in number" and being "unfamiliar with taking risks" (2003, p. 90).

Furthermore, Alsop (2008) agrees the Millennial Generation is "afraid to take risks and make mistakes" (p. 124). As leaders, Zemke et al., (2000) explain, they should be able to inspire trust and articulate a vision, and also take risks. Creative organizations in the future will require this ability. Risk-adverse behaviors in Millennials, including lack of spontaneity and non-impulsive behaviors, are also supported in the literature by Erickson (2008), IBM Global Business Services (2010a), Michalko (2003), Robinson (2010), and Zakaria (2008).

Literature in disagreement with the findings. The respondents to the survey indicated risk-aversion to be low, but Bennis and Thomas (2002) found leaders of all ages remained creative and able to solve problems when they remained youthful and energetic. To be able to remain good leaders, being "open, willing to take risks, hungry

for knowledge and experience, courageous, [and] eager to see what the new day brings" (p. 20) will be a necessity. This helps a leader remain creative and able to meet challenges as they arise. However, this explanation does not align with the results of the survey. And, even though those studied are an emerging group as leaders, to be successful, Bennis and Thomas believe they need to remain open to taking risks. The question remains to what extent the millennials will be able to change their behaviors and skills so they can learn to take the risks necessary to become more creative and keep their youthful attitudes.

Along with taking risks, encouraging some spontaneity in an organization leads to more success (Bennis & Thomas, 2002). Acting on impulse, remaining flexible and adapting to the problem at hand leads to an "implied creativity" (p. 101). That adaptive quality allows the leader to "take pleasure in the problem-solving process" (p. 104). Although the results of the study showed the group did not readily aspire to be impulsive or take risks, as deemed vital by Bennis and Thomas for leadership ability, they did have a desire to solve problems. Still, because the group opposes failure as a possibility in the process of solving a problem, results might not be as creative as desired. For these members of Millennial Generation to succeed, learning to take risks will be necessary. Bennis and Thomas (2002) suggest a "love of learning" can help the "fear of failure" (p. 117). Since the millennials value learning (Howe & Strauss, 2003), gaining the knowledge that taking a risk, whether a success or failure, "you will always learn something" (p. 117). But, the question remains as to how this concept will be embraced by these members of the Millennial Generation.

Still, the respondents interpreted themselves to be *creative;* 54% agreed they had creative tendencies. This data is contrary to Alsop (2008), who calls the group "a scared generation" (p. 123). He indicates the reason they are not creative in their work is due to their risk-aversion and fear of making mistakes. Welkener (2000) agreed the generation perceived creativity to be for a select few in the fine art fields. Overall, they did not believe they have the creative talents they did when younger. As the group matured into college-level courses, their tendency to think creatively was perceived to be "childish" by their professors. The need to show an "academic" approach and "logical, rational, and thinking in objective ways, was modeled by their teachers" (pp. 262-263). And, unless they were in a creative discipline, the only creative outlet was in other activities on campus outside the classroom. Other literature also disagreeing the students were creative, indicating that risk is also a factor, are Howe and Strauss (2003), Michalko (2003), and Pasieka (2009).

Although agreeing to a lack of creativity in organizations, Zemke et al., (2000) say everyone has the ability to be creative. "Over the years it gets drummed out of one's conscious mind to make room for more serious pursuits like workplace norms, societal conventions, and the litany of rules and regulations" (p. 187). But they also say, "it is really about risk" (p. 187) and if the respondents to the survey indicate they are risk-averse, but also perceive themselves as creative, there is a disconnect in the literature about the group.

Another disconnect about the Millennial Generation in the literature is the indication by the survey respondents of their wish to travel. This seems logical due to the more global orientation they will need to embrace, but the survey respondents' desire to

travel is not included in descriptions of millennials as a whole. What might indicate a yearning for seeing the world could be indicated by the qualities of "thinking globally, [and] appreciating cultural diversity" (Goldsmith et al, 2003, p. 2). Additionally, the intention to be inclusive of others and a desire to solve the global environmental issues could lead the group to seek travel and understanding as a part of their role in the world. This also might mean the Millennial Generation has a more inclusive world in mind for the future.

Conclusions and Implications

Although the three main topics of this study (creativity and innovation, the millennial generation, and leadership challenges) are not new in their own right, when the issues collide we begin to see how daunting the challenges become and how they impact future growth for everyone. And to add another twist, the current economical situation we find our country facing highlights even more how important it is to understand how these challenges are intertwined.

Taken individually, the issues being discussed here create challenges within their respective areas: Creativity and innovation talents need to be the focus to build new industries and new jobs that replace the ones moved overseas, as well as encouragement of creativity in the workforce as an overall standard; the millennial generation's impact on organizations will be an adjustment that will shake up the workforce and challenge current technology, processes and practices; leadership that requires four generations of workers to collaborate could prove to be a delicate balance, and to add the additional constraints the millennials will bring and the need to encourage a creative mind-set, leaders will have an increasingly difficult undertaking; and as the education sector is

encouraged to adjust to the needs of the new economy and jobs associated with new industries, getting faculty to collaborate and drive the changes that need to take place will be a daunting task. Add to the mix the current economic climate and the inability of the government leaders to successfully collaborate in achieving a solution. The outlook seems impossible.

However, when we review the generational theory outlined in association with the Millennial Generation's fit into the cycles of history, it seems to all make sense. The Millennials have been a focus since birth for a reason. They appear at a time when history repeats a pattern that will advance to a crisis (I'd venture to say we are already feeling that crisis) and culminate with a renewal of "spirit" and "regenerated society" (Strauss & Howe, 1997, p. 256) that will either peak with "a triumphant or tragic conclusion that separates the winners from the losers, resolves the big public questions, and establishes the new order" (p. 256). For us to anticipate these events and realize what we are progressing through affords us the ability to bring about triumph as a foreseeable option.

Generational theory, as outlined by Strauss and Howe (1991, 1997), reviews events from past historical timeframes and categorizes the activities, finding patterns over time. "The reward of the historian is to locate patterns that recur over time and to discover the natural rhythms of social experience" (Strauss & Howe, 1997, p. 2). And the theory (reviewed in the literature in Chapter 2) is proving to hold up with generalized predictions of future events. The structure of the theory includes two-decade timeframes with reoccurring profiles of social traits attributed to the generational groups. By tracing the historical occurrences for the past several centuries, and viewing the development of the cohort groups like seasons in time, the predictions and conclusions outlined are

remarkably accurate. Assuming the end of an era where a bleak winter-season brings about "a renewal in the seasons of time" (Strauss & Howe, 1997, p. 270), the challenges we are now experiencing have been expected. The polarizing stances our government seems to be stuck in will, in part, be challenged by the changes that will soon occur. And if we are able to see a path to some already identified areas that need to also shift, the course of the stormy period can be a productive one, with the results of this turning-in-time resulting in an improved world. And, the crisis tends to feel less ominous when we know this is something destined to occur.

With the current economical situation, a global approach to viewing our society needs to be the norm. Our population, even our politicians, tend to view the world within the confines of the borders of our country. They complain about jobs that have been outsourced overseas (especially China and India) and yearn for them to return. In very realistic terms, those jobs will not come back. We need to look at creating jobs within new industries for the future needs of our people (Florida, 2010). And the skills needed for the workers in these new roles will need to be supported and encouraged by the education system. "Creativity will be vital, with employees needing to display new patterns of knowledge deployment derived from more flexible thinking" (Chowcat, 2001, p. 41). Organizations will need to support the learning of their employees by providing training in key areas to support the new global needs. And the four generations of employees in the workplace today will need to work together to alleviate the current and future challenges we are facing.

What is remarkable about this prediction of the crisis in the political and economical structure of the country is the unawareness by those in control. Also not in the

realm of their understanding is the outsourcing of manufacturing jobs overseas, which will not return, and the job outlook is not changing without new industries to drive new job creation. The majority of the country is not aware similar events have happened before during previous winter-end timeframes, including the Civil War and the Great Depression. Whether the majority of Americans don't want to admit these times are as volatile, or they choose to ignore the fact, we are living through challenging times. And the events have been supported herein by the survey of the Millennials, which support the theories.

Creativity. It has been supported in the literature and this study that creativity, innovation and critical thinking in the workplace are keys to success. And as previously stated, the global aspects of the economic, cultural and technological environments require out-of-the-box thinking to remain competitive. The United States has traditionally been known for the ability to innovate. However, competition from other countries is challenging that notion. The manufacturing sector of the labor force has shifted overseas, and as the adjustment in the job sources occur, it is anticipated there will be two predominate sectors, "higher-paying knowledge, professional, and creative jobs … and lower-paying routine jobs in the service economy" (Florida, 2010, p. 117). The skills for these two sectors require "analytical skills" and "social intelligence skills" (p.118), however, it will be important to increase these skills in all areas of the workforce. Creativity and problem solving will also be important for those in the service industries, including a focus on respect, empathy and appreciation of diversity.

As the new economy adjusts, so will a growing population impact our cities and metropolitan areas. Infrastructure, water, food sources and energy resources will be vital to sustain the cities. And even though advanced technology will allow employees to

telecommute, transportation will continue to be an issue as we battle to overcome our dependence on foreign oil sources. And the American Dream of owning a home with a white picket fence will need adjust to accommodate a more mobile society and a different balance in the economic outlook for most of the population (Florida, 2010).

For this country to continue to remain economically viable the workforce needs to be flexible in their thinking; creative risk-taking needs to be encouraged for the workers to be knowledgeable in their jobs. As the creative aspects in the workforce become even more in demand, challenges in the educational sector also come to light. Attention is already being put on the STEM (Science, Technology, Engineering and Mathematics) aspects of K-12 academic curriculum (Duncan, 2010). This supports an increasing need in jobs for the health, science and technology fields. But, the teaching-to-the-test and mandated testing practices of the past 10 years are not conducive to the learning of critical thinking and creative problem solving necessary to compete in these fields. "We need a learning system that fuels, rather than squelches, our collective creativity" (Florida, 2010, p. 183). Solving the education issues will prove to be very challenging, especially since the systems are slow to change and even more politically reactive. A new approach to learning, encouraging technology, self-motivation and access to creativity-stimulating resources will be necessary to satisfy the needs of the Conceptual Age (Pink, 2005a).

Additionally, the availability of talent in executive roles has been an increasing problem. Recruiting and retaining the right employees, or providing adequate succession planning and training has become a real challenge for organizations. And the education system is not adjusting fast enough to learning methods that encourage creativity or to

address new technological methods. “We need a learning and development system that is in sync with the new creative economy” (Florida, 2010, p. 183).

The Millennial Generation. More than anything else found in the study herein, support of generational theory as a way to anticipate future trends as well as identifying traits of workers identified with specific generational identities has been upheld. The “seven core traits of the millennials: They are special, sheltered, confident, team-oriented, conventional, pressured, and achieving” (Howe & Strauss, 2003, pp. 51-52) has also been confirmed in the group of respondents to this survey.

Not meant to be a stereotypical assumption, but more of a prediction of group traits and behaviors, a generation is a cohort group identified by birth dates that experience similar events in their formative years. The group studied belongs to the Millennial Generation who are now graduating from college and entering the workforce. The traits noted above have been confirmed in colleges and are now coming with them into the workplace. Established by the study, the aspects of low spontaneity (risk aversion, low impulse behaviors) and the lack of time-on-task doing creative projects were the most apparent issues found. These areas are associated with the sheltered, confident, and team-oriented traits. However, high levels of empathy (appreciation of diversity, tolerance, flexibility and acceptance of others ideas) ranked high in the responses. These areas support the notions the millennials are special, confident, and conventional in their traits.

Additional aspects in the continuing studies about the Millennial Generation include the rise of a more highly educated female gender. But whatever gender, since this generation is the one most affected by the teach-to-the-test and No Child Left Behind

(2001) legislation of the K-12 educational system, the pressure for them to achieve has been taken to heart. And, due to the more fact-based aspects of their education, the ability to think creatively and take risks is less likely. Because the millennials have been coached through tough issues to reach a positive result, they have not generally had to deal with failure or the lessons to be learned from failures. Their aversion to failure is what holds them back from working though creative solutions that leads to innovative approaches.

However, the millennials will be a force to be reckoned with. They are highly connected to each other through social media, and acceptance by the group is very desirable. In their political tendencies, they reflect many of the traits of their parents. But unlike their parents, they "are united across gender and race in their desire to find 'win-win' solutions to America's problems" (Winograd & Hais, 2008, p. 2). How this will play out in the upcoming elections is unknown, but one thing is obvious, the political pundits have not acknowledged their power nor necessarily understand the dynamics of the group as a whole. In the 2008 election, the overwhelming support of the generation helped to realize the *Change* everyone desired (Winograd & Hais, 2008). And the 2012 election could prove to be as powerful a result.

Leadership. As previously stated, a "win-win" (Winograd & Hais, 2008, p. 2) solution is a desired outcome for conflicts in organizations. When people feel they are a part of a solution, and also see the fruits of their labor come to fruition, a culture of collaboration and innovation can exist. And leaders are more and more aware of the need to foster creativity and innovation in their institutions.

Development of their employees skill set will be necessary to stimulate the creativity and innovation necessary in the organization. To do so, a leader will need to

recognize the skills of each individual. Promoting a creative atmosphere and culture to stimulate an innovative approach is also necessary. And as we saw with the millennials, encouraging risk taking within a safe environment will be necessary to build the confidence needed for success. To assemble a highly effective and creative team of individuals, cooperation and collaboration could include additional training, culture shifts, confidence building, coaching, and "breaking down hierarchies that intimidate or squelch creative thought" (Robinson, 2001, p. 22).

A factor that is not only vital to weather the challenging economic climate ahead, but also understand the changes occurring within the organization, the workforce now appearing in our institutions are made up of four generations of workers. From the Silent Generation to the Baby Boomers, Gen-X and the Millennials, different attitudes, skill sets, training needs, expectations, and work ethics are colliding within the workplace. And the groups will need to be able to interact, collaborate and create and innovate with the help of understanding leaders. Moreover, with a large number of boomers retiring in the near future, or maybe not due to the economic issues, orchestrating the talents of the workforce at hand will land directly in the lap of the leaders. Retaining good talent in key positions will be imperative to remain competitive in a more global landscape. Creating an engaged workforce by utilizing the talents of their teams according to generational strengths will be necessary to keep the organization viable globally.

Additionally, employers will need to partner with academic institutions to support the education and skills essential for global competitiveness. A focus on creative approaches in the classroom to generate confidence in producing innovative solutions as an employee should be discussed with the business community. The academy will need

to embrace new approaches to providing a well-rounded education that include skills necessary to be successful in the global workplace. But this will be a challenging task. Both higher education institutions and the K-12 system will need to analyze how to better engage, educate, and train a new type of worker that will be a creative, global-thinking 21st Century employee.

One area highlighted in the study that could be important to education and the business community alike was the negative indication that tolerance decreased as leadership ability rose in the individual (See Table 17). This could indicate a high level of proficiency and expectation the leader expects of himself/herself while not tolerating inability or mediocrity in others. Leaders aspire to a vision of the future and expectations of excellence for themselves and their staff. The differences in expectation and reality might leave the leader with disappointment or a less tolerant attitude toward others. The education and business communities should assure leaders become aware of coaching and development training for occurrences such as these.

Conclusions about stated limitations and assumptions. Prior to receiving the responses to the survey, a concern about how the mix of respondents could impact the results was stated. The use of 18-24 year old college-level members of the Millennial Generation was determined to be the focus of the study. However, how the gender mix and the lists of Facebook *friends* could skew the results was uncertain. The respondents' gender mix of two-thirds female was somewhat expected due to the friend lists, however, in reviewing the normative samples of both the SCAB and the SPLI, that same mix was similar on both. And, because of the trends in higher education is more female dominant, more interest in scholarly activities by the female gender could explain this result.

The limited number of responses from the Facebook *friend lists* and the multitude of responses from the ad was not the expected mix. Due to the overwhelming responses from outside the original Facebook *friend lists*, the actual responses garnered more variety by including a larger-than-expected socio-economic group. And, using Facebook as the vehicle for the survey delivery proved to be an interesting and effective way to gain the responses necessary for the survey. However, with well over 3,000 clicks on the link to the ad, the return on completed surveys was much lower at 112. So, a way to encourage completed surveys might be the focus on any further attempts to use this method for data collection.

Overall, the use of Facebook for the delivery of the survey instruments was effective, but the assumption it would limit a variety of attitudes and ideas due to the use of friends with similar outlooks did not become an issue. Nor was the fact it was an online method limit the responses as most college students are used to using online resources. And, since the use of Facebook has become the norm with the Millennial Generation, as well as many other people in US population, the method to communicate with this method did not limit the variety of ideas received for the survey.

An assumption that Facebook used as the collection devise would influence the results has not shown to be impactful. However, those respondents who frequent the social media site could be more savvy technologically than those who do not frequent the site. The whole generation has grown up in a digital world where the use of digital media to keep in touch socially is the norm. So, it would make sense to use this method for this group, but for other populations it might not be the best way in which to communicate.

Another concern was whether the respondents would be able to effectively self-evaluate their own creativity levels. I was very impressed with the level of response in this regard. The respondents seemed to reflect effectively on their abilities and attitudes as outlined by the survey instruments. A conclusion here is the success of the survey instruments in their design to gather adequate self-evaluation in responses.

An assumption made prior to implementation of the survey indicated the millennials' behaviors show an aversion to taking risks. The results of the survey not only showed that to be true, it was the most dramatic take-away from the survey overall. The behaviors including risk and impulsive behaviors were indicated as the lowest scoring questions on the SCAB portion of the survey. These results upheld the initial assumption, but were surprising in how dramatic they occurred.

Recommendations and Observations

To continue the discussion on the topics contained in this study, some suggestions for future research and observations about the research contained herein are included. Additionally, recommendations for policy reform and practitioner practices are addressed.

Recommendations for future research. An on-going look at creativity in the Millennial Generation should be done to evaluate how the group is doing as they continue to come of age and enter the workforce. For the aspects of the Millennials' education, and as academic institutions adjust their methods, a persistent observation and assessment of changes needs to be recorded. Additionally, a comprehensive study of the relationship of education and creativity skills should be evaluated, as should the connection of creativity skills to other disciplines (including the STEM course emphasis now being developed for

the K-12 system). Of special interest should be the use of art-based courses in the mix of the curriculum offered.

A continued look at the relationship of creativity and leadership should be investigated, including the growth of leadership abilities in the Millennials. As they age and develop into the leaders of tomorrow, tracking the Millennials' journey and challenges will be important information.

Methodological enhancements. To study these topics more in depth, some changes to the methods used in this study should be considered. Since this survey was a convenience sample, it was not generalized to the entire generation. Additionally, the age group was narrowed to look at only the college-aged section of the generation. A larger, more inclusive sample should be tackled. Additionally, the study utilized questions that required self-perceptions for answers. To make the study more robust, a mixed method study using quantitative and qualitative methods as well as a 360° approach should be considered.

To even get more in-depth information, multiple creativity instruments could be used to verify the results. Additionally, a long-term study could be conducted to monitor the group as they age. And, if possible, a comparison of the Millennial Generation to other generations in terms of creativity tendencies would be an interesting study and garner information that would be valuable.

Recommendations for policy reform. There is already conversation surrounding education reform, especially in the primary and secondary grades. With the *No Child Left Behind* legislation in question, federal and state Departments of Education modification efforts in progress, the need to promote creativity and innovation skills is a vital necessity. The creative-based courses once eliminated from the curriculum should be

returned to encourage development of creative skills. And, more courses including creative activities should be encouraged, along with teacher training on how to support and assess those abilities. No more teaching to the test should be allowed. This also means new ways to evaluate teachers' performance would need to be developed.

The business and community encouragement of educational reforms should include a challenge to the schools to provide creative activities for all students. The need to allow students to try and fail, then try again, should be encouraged in their learning process. This would make risk-taking in the workforce acceptable in the quest of the *right* answer to a problem as opposed to a *quick* answer.

Outside the educational arena, the business community should examine how to compensate those in creative fields appropriately. With a battle for talent looming for highly creative jobs, a suitable method for compensating those employees should be considered. On another note, where businesses are challenged to improve creative and innovative skills in their organizations, the use of in-house training methods should be developed to intensify technological and analytical, inventive skills.

Recommendations for practitioners. Probably the most difficult issue to suggest here is to ask faculty to change their teaching methods. Where they feel they have found success, change might not make sense. Recent discussions about new innovation and creative methods have fallen on skeptical ears. Just one in a series of many changes that continue to come down from administrators has plagued the effort. But the efforts should not stop. The ability for the changes to be realized relies on faculty embracing change. And that might mean stepping out of a comfort zone. Studies need to be done to show the changes and effort is valuable. Faculty will embrace the efforts when they see student

engagement and outcomes improve. But, a holistic approach is necessary to revise long-standing methods and assumptions. This is a huge task and will not be an easy one.

As noted in the policy reform section, more courses available to students, especially in the K-12 sector that are creativity-based should be returned to the curriculum. These courses allow students to explore areas they have a passion for and allow experimentation as well as a safe environment in which to take a risk. Students should be allowed to produce creative-based projects in all classrooms, especially where multiple subject areas could be included in the project.

Additionally, training for faculty members to be able to evaluate creative-type projects should be reviewed. Students have reported feeling limited by specific methods dictated by their instructors. For those faculty who are not comfortable evaluating creative work, or outside-the-norm projects, partnering with instructors who are more versed in critique and evaluation should be promoted. An instructor who feels more confident in evaluating various types of creative work will challenge their students to explore topics in ways not tried before. Students should be encouraged to push the boundaries of what is expected and the teacher should not limit the creative spark when students feel they can express themselves by submitting out-of-the-box solutions.

Faculty training should also be encouraged to support creative approaches to methodology and curriculum design. Problem solving using real-world projects should be the expectation for all courses. To do so, a partnership with the business community should be encouraged. Some of these practices are already being incorporated into secondary education environments. The business community already mentors young adults to encourage real-world aspects. But pushing creative and problem solving should

be the norm. And assessment of conceptual ability needs to be underscored and further developed.

Bottom line, more time-on-task is necessary in the education of our students to encourage more critical, creative thinking. And, risk taking and experimentation needs to be the norm, not teaching-to-the-test.

For the business community, encouraging risk is also paramount. Encouraging creative approaches and out-of-the-box thinking is necessary to compete globally. To do so, failure should be allowed in a safe environment where repercussions are not punitive. This will also require training. So, will the education and business sectors see the value in combining efforts to solve these issues?

Final Comments

As the mood of the country seems to surround anxiety and fear, and as a pending "rendezvous with destiny" (Strauss & Howe, 2000, p. 353) seems to be leading the nation toward major changes, individual elements of this study might not seem to be a huge priority. But, as we look closer, these tools combined will allow us to succeed in the new world order. Historically, creativity has been the way to new ideas, methods and a better world. And in the challenging times ahead, some solid, strategic problem solving will be needed to navigate through the difficult issues and come out with a positive outlook.

I do believe the outlook is a positive one. Due to the predictions outlined by the study of historical trends, we have a clue on what is to expect. And we have the opportunity to solve the issues proactively. We need to take a risk—and not be afraid of failure.

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APPENDIX A

Scale of Creative Attributes and Behavior

There are many different ways to be creative. In responding to the following questions, think of all the new things and ideas that you generate, as well as all the ways you express yourself artistically as creativity. These ideas and expressions may include art, writing, new ideas, new uses for something, etc. Using the scale below, indicate how ***characteristic*** of you each statement is by circling the appropriate number. Don't spend too much time on any one statement, but give the answer that is most characteristic of you.

Age: _____ **Gender:** **Male** **Female**

College Attended: _____ **Program of Study:** _____

Highest College Level: **None** **Freshman** **Sophomore** **Junior** **Senior** **Graduate**

		Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree
1	I spend much of my time creating things.	1	2	3	4	5	6	7
2	I dabble in many different hobbies.	1	2	3	4	5	6	7
3	I enjoy creating new things.	1	2	3	4	5	6	7
4	I work on some type of creative project on a daily basis.	1	2	3	4	5	6	7
5	I am often able to see the "big picture" where others can't.	1	2	3	4	5	6	7
6	I am often able to make connections between seemingly unrelated things or situations.	1	2	3	4	5	6	7
7	I have an ability to find the hidden potential of ideas that others often can't see.	1	2	3	4	5	6	7
8	When someone asks me to solve a difficult problem, I can usually find creative solutions.	1	2	3	4	5	6	7
9	I am somewhat mischievous.	1	2	3	4	5	6	7
10	I am very spontaneous.	1	2	3	4	5	6	7
11	I am impulsive.	1	2	3	4	5	6	7
12	I am a "risk taker."	1	2	3	4	5	6	7
13	I am flexible in my thinking.	1	2	3	4	5	6	7
14	I like new ideas.	1	2	3	4	5	6	7
15	I am very tolerant of other people.	1	2	3	4	5	6	7
16	I am accepting of other peoples' ideas.	1	2	3	4	5	6	7
17	I often fantasize.	1	2	3	4	5	6	7
18	I don't like to waste my time daydreaming.	1	2	3	4	5	6	7

19	I would have difficulty just letting my mind wander without control or guidance.	1	2	3	4	5	6	7
20	I like to imagine going to new places.	1	2	3	4	5	6	7

* Questions 18 and 19 are reverse scored.

APPENDIX B

Consent for Use of Instrument

November 29, 2009

Dear Colleague:

Enclosed please find a copy of the Scale of Creative Attributes and Behavior (SCAB) and information on some of its correlates, reliability, and validity. The scale is a copyrighted instrument, but is available for research use free of charge. In exchange for use of the scale, however, I ask that you send me copies of any articles, conference abstracts, unpublished papers, and/or summaries of unpublished studies in which you use the scale. I would also appreciate any reports you can provide describing your findings of the scale's psychometric properties (internal consistencies, means, standard deviations, etc.). I make these requests so that I can stay up-to-date on research using the SCAB and its applications.

Thank you for your interest in my work. If you have any questions, do not hesitate to contact me. I can be reached most easily via email. Best of luck with your research.

Regards,

Kathryn Kelly

Kathryn E. Kelly, Ph.D.

Enclosures

Please Note: Items 18 and 19 are reverse scored

APPENDIX C

Student Leadership Practices Inventory

Consider each statement in the context of one student organization with which you are now (or have been most) involved. This organization could be a club, team, chapter, group, unit, hall, program, project, and the like. As you respond to each statement, maintain a consistent perspective to your particular organization.

Please respond to every statement. If you can't respond to a statement (or feel it doesn't apply), circle a 1.

	How often do you *typically* engage in the following behaviors and actions? Circle the number to the right of each statement, using the scale below, that best applies. 1 If you **Rarely or Seldom** do what is described 2 If you do what is described **Once in a While** 3 If you **Sometimes** do what is described 4 If you **Often** do what is described 5 If you **Very Frequently** or Almost Always do what is described	**Rarely or Seldom**	**Once in a While**	**Sometimes**	**Often**	**Very Frequently**
1	I set a personal example of what I expect from other people.	1	2	3	4	5
2	I look ahead and communicate about what I believe will affect us in the future.	1	2	3	4	5
3	I look around for ways to develop and challenge my skills and abilities.	1	2	3	4	5
4	I foster cooperative rather than competitive relationships among people I work with.	1	2	3	4	5
5	I praise people for a job well done.	1	2	3	4	5
6	I spend time and energy making sure that people in our organization adhere to the principles and standards we have agreed on.	1	2	3	4	5
7	I describe to others in our organization what we should be capable of accomplishing.	1	2	3	4	5
8	I look for ways that others can try out new ideas and methods.	1	2	3	4	5
9	I actively listen to diverse points of view.	1	2	3	4	5
10	I encourage others as they work on activities and programs in our organization.	1	2	3	4	5
11	I follow through on promises and commitments I make in this organization.	1	2	3	4	5
12	I talk with others about sharing a vision of how much better the organization could be in the future.	1	2	3	4	5
13	I keep current on events and activities that might affect our organization.	1	2	3	4	5
14	I treat others with dignity and respect.	1	2	3	4	5

15	I give people in our organization support and express appreciation for their contributions.	1	2	3	4	5
16	I find ways to get feedback about how my actions affect other people's performance.	1	2	3	4	5
17	I talk with others about how their own interests can be met by working toward a common goal.	1	2	3	4	5
18	When things do not go as we expected, I ask, "What can we learn from this experience?"	1	2	3	4	5
19	I support the decisions that other people in our organization make on their own.	1	2	3	4	5
20	I make it a point to publicly recognize people who show commitment to our values.	1	2	3	4	5
21	I build consensus on an agreed-on set of values for our organization.	1	2	3	4	5
22	I am upbeat and positive when talking about what our organization aspires to accomplish.	1	2	3	4	5
23	I make sure that we set goals and make specific plans for projects we undertake.	1	2	3	4	5
24	I give others a great deal of freedom and choice in deciding how to do their work.	1	2	3	4	5
25	I find ways to celebrate accomplishments.	1	2	3	4	5
26	I talk about values and principles that guide my actions.	1	2	3	4	5
27	I speak with conviction about the higher purpose and meaning of what we are doing.	1	2	3	4	5
28	I take initiative in experimenting with the way we can do things in our organization.	1	2	3	4	5
29	I provide opportunities for others to take on leadership responsibilities.	1	2	3	4	5
30	I make sure that people in our organization are creatively recognized for their contributions.	1	2	3	4	5

Total the SLPI by adding the scores according to the following sections:

Section Score

Percentile Rank

- **Model the Way** (Questions 1, 6, 11, 16, 21, 26) _____ _____
  High = 25-30, Moderate = 21-24, Low = 17-20
- **Inspire a Shared Vision** (Questions 2, 7, 12, 17, 22, 27) _____ _____
  High = 24-30, Moderate = 19-23, Low = 14-18
- **Challenge the Process** (Questions 3, 8, 13, 18, 23, 28) _____ _____
  High = 24-30, Moderate = 19-23, Low = 14-18
- **Enable Others to Act** (Questions 4, 9, 14, 19, 24, 29) _____ _____
  High = 26-30, Moderate = 23-25, Low = 18-22

- **Encourage the Heart** (Questions 5, 10, 15, 20, 25, 30) _____ _____
  High = 26-30, Moderate = 22-25, Low = 17-21

Scores are tabulated by the topics above and ranked with a percentile ranking of SLPI scores of over 2,200 other students who have taken the inventory. The percentile ratings are then given a "High," "Moderate," or "Low" ranking. These rankings allow the student to compare themselves to other student leaders. "Given a 'normal distribution,' it is expected that most people's scores will fall within the moderate range" (2006, Kouzes & Posner, p. 22).

APPENDIX D

Consent for Use of Instrument

KOUZES POSNER INTERNATIONAL

August 27, 2010

Melinda Lester

Dear Melinda:

Thank you for your request to use the Leadership Practices Inventory (LPI) in your dissertation. We are willing to allow you to ***reproduce*** the instrument in written form, as outlined in your request, at no charge. If you prefer to use our electronic distribution of the LPI (vs. making copies of the print materials) you will need to separately contact Lisa Shannon (lshannon@wiley.com) directly for instructions and payment. Permission to use either the written or electronic versions requires the following agreement:

> (1) That the LPI is used only for research purposes and is not sold or used in conjunction with any compensated management development activities;
> (2) That copyright of the LPI, or any derivation of the instrument, is retained by Kouzes Posner International, and that the following copyright statement is included on all copies of the instrument; "Copyright 8 2003 James M. Kouzes and Barry Z. Posner. All rights reserved. Used with permission",
> (3) That one (1) **electronic** copy of your dissertation and one (1) copy of all papers, reports, articles, and the like which make use of the LPI data be sent **promptly** to our attention; and,
> (4) That you agree to allow us to include an abstract of your study and any other published papers utilizing the LPI on our various websites.

If the terms outlined above are acceptable, would you indicate so by signing one (1) copy of this letter and returning it to us. Best wishes for every success with your research project.

Cordially,

Ellen Peterson
Permissions Editor

APPENDIX E

Consent for Use of Instrument

From: Notkin, Debbie - San Francisco
Sent: Thu 10/21/2010 3:47 PM
To: Lester, Melinda (student)

Subject: Permission to use the Student Leadership Practices Inventory

Dear Melinda Lester,

Thank you for your request for permission to use the Student Leadership Practices Inventory (the "Work") in an online survey setting such as Survey Monkey.

The Use: You may place the LPI questions into a password-protected online survey setting and may collect data based on those questions.

1. Permission is granted for this Use, however, no rights are granted to use any content that appears in the Work with credit to another source.
2. Credit to the Work will appear as follows: *Student Leadership Practices Inventory, 2nd Edition.* Copyright 2006 by John Wiley & Sons, Inc. All rights reserved. Reprinted by permission of John Wiley & Sons, Inc.
3. We have received your payment of $100 for this Use.
4. This license is nontransferable. The license shall automatically terminate if you fail to exercise the rights hereunder to use the Work for the specified term, or comply with the terms herein.
5. You agree to supply us with a copy of your research results, and any papers you write based on this research when your project is completed.

Thank you for your interest in the Student Leadership Practices Inventory. Please let me know if I can be of further assistance.

Debbie Notkin
Contracts Manager

APPENDIX F

Survey Scripts

Script to Contributors (Request to send to Facebook friends):

My name is Melinda Lester. I am a doctoral student in the Organizational Leadership program at Pepperdine University. I am doing a research study about creativity and how it impacts leadership ability in college students and recent graduates. You can help! Please post the information below on your Facebook site and send it to your list of "friends." Include the link to SurveyMonkey for access to the survey. The survey is confidential, and used for educational research only.

Thank you for your help in conducting this research study. If necessary to gain more respondents, I will ask you to post the information again as a reminder to your "friends" to take the survey.

For Contributors (Sources for Facebook links):

How creative are this generation of college students? How does their creativity level impact their leadership ability? I invite you to participate in a survey to help answer these questions. As a doctorial student working on a study of college students and recent graduates, this survey involves creative and leadership tendencies. There are no right or wrong answers and the study is completely confidential. Please click on the link to participate in this survey (it will take approximately 15-20 minutes). Please also share this link with your friends on Facebook. The more surveys that are taken will result in more complete information. Thank you for participating. Results of the survey will soon be available on Facebook.

SurveyMonkey Link: https://www.surveymonkey.com/s/H3GS6LQ

APPENDIX G

Facebook Ad and Post Content

Facebook Ad Content (Available on Facebook):

Are You Creative?
https://www.surveymonkey.com/s/P5PS278

College students and recent grads – click the link to take a survey on creative and leadership tendencies.

Facebook Post Content (Completed survey directed to Facebook site):

I am a doctoral student at Pepperdine University doing a study of Innovation, Creativity and Leadership skills in college students and recent graduates.

Help me with my study! If you are between ages 18-24, in college or not, click on the link below and take my survey. It is confidential and will only be used in educational research. The survey takes approximately 15-20 minutes - Thanks for your help and support!

Go to this site to take the survey: https://www.surveymonkey.com/s/P5PS278

Facebook Ad and Post Link: https://www.surveymonkey.com/s/P5PS278

APPENDIX H

Survey Responses from Institutions by Region

Table 20.

Survey Responses from Institutions by Region (Multiple responses in parentheses).

Northeast	1. New England	Quincy College University of Massachusetts
	2. Middle Atlantic	Bucknell University Camden County College Ithaca College Rochester Institute of Technology
Midwest	3. East North Central	Adrian College Alma College Chemekta Community College Elmhurst College Michigan Technological University Northern Illinois University University of Cincinnati University of Illinois at Urbana-Champaign Walsh University
	4. West North Central	Crown College Iowa School of Beauty Southwestern College St. Louis Community College
South	5. South Atlantic	Coker College Embry Riddle University James Madison University Liberty University Old Dominion University Virginia Tech
	6. East South Central	Berea College Chattanooga State Technical Community College Lipscomb University
	7. West South Central	Baylor University Everest College Dallas Southern University Temple College Texas A&M University Weatherford College
West	8. Mountain	Brigham Young University Colorado University Boulder University of Colorado
	9. Pacific	Art Institute of California (2) Azusa Pacific University California State Polytechnic University California State University Fullerton (5) California State University Long Beach California State University Northridge

		California State University Sacramento Chaffey College (3) City College of San Francisco Diablo Valley College Folsom Lake College Fresno City College Fullerton College (5) International Academy of Design and Technology Irvine Valley College Mesa Community College (2) Mira Costa College Palomar Community College Pepperdine University (3) Point Loma Nazarene University San Diego State University (15) San Francisco State University Santiago Canyon College Taft College University of California Irvine University of California Santa Cruz University of California Los Angeles University of California San Diego University of San Diego University of Southern California Whittier College (2) University of the Pacific Cascade Beauty College
International	Turkey Australia	Bilkent University University of Technology

Note. Regions of the U.S. outlined by the U. S Census Bureau (U. S. Department of Commerce, 2000). Retrieved from www.census.gov/geo/ww/us_regdiv.pdf