**MINDFULNESS REFLECTIVE PRACTICE AND CREATIVE NOVELTY AMONG LEADERS**

by

Mary Ventrella

DINAH MANNS, PhD, Faculty Mentor and Chair

CONNIE FICKENSCHER, PhD, Committee Member

JOCELYN SHERMAN, PhD, Committee Member

Anna Hultquist, Dean   
Harold Abel School of Social and Behavioral Sciences

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

Capella University

June 2016

© Mary Ventrella, 2016

**Abstract**

Creativity is considered the most desirable 21st century skill and vital to the life of an organization therefore, successful leaders recognize that creativity is critical in any kind of organizational environment. Leaders who habitually act mindlessly develop patterns that stifle creativity, and perpetuate outdated behavior and familiar routines that suffocate followers. This dissertation study investigated the effects of mindfulness reflective practice on creative novelty among the leaders of organizations. The fundamental question of the study was: is there a difference in creative novelty among leaders after implementing the intervention of mindfulness reflective practice as measured by Langer’s Mindfulness Scale? It was hypothesized that the effectiveness of the mindfulness reflective practice intervention could be demonstrated by comparison between the pre and post test scores. When the data was analyzed, the post-test scores indicated significant differences. While the study concluded that mindfulness reflective practice makes a difference in both the creativity and novelty seeking components of creative novelty, the results did not show significant difference in novelty producing and engagement. Furthermore, the results need to be taken in the context of the limited sample of leaders used, and caution needs to be exercised in generalizing these findings to all leaders, and a more diverse population. However, the implications are that mindfulness reflective practice contributes to the effectiveness of individuals and organizations.

**Dedication**

This dissertation is dedicated to my mom and dad, Vittoria and Pasquale Ventrella, my husband, John DeAngelis and my three sons, Angelo, Juliano and Michael DeAngelis.

**Acknowledgments**

I would like to begin by acknowledging Brenda Webb for having given me the teaching opportunity that continues to reward my days and enrich my knowledge, and for the encouragement that motivated me to pursue further education. Thank you to my new friends and colleagues who encourage me to hold my passion of teaching, curriculum development and future endeavors. You know who you are.

Lorraine Gregson is owed a special debt of gratitude for keeping things real and encouraging me to enroll in a PhD program. That day around her table was when I committed to this six year journey.

Carol Nichol, my best friend for life, who is like a sister, mother and mentor to me all in one needs to know that our daily conversations inspired me to keep moving forward. I am deeply grateful as I carry her creativity, passion, wisdom and unconditional acceptance with me every day.

My friends who reminded me to laugh and their forgiveness have been priceless gifts when I was not always available. Our hikes and gatherings together where immensely fulfilling and rejuvenating. Many friends and colleagues have fueled my passion for teaching and learning. I thank every child, youth, family community which has shared their story, and all my supervisors and leaders who have guided me, believed in me and challenged me to be a better leader.

Dr. Dinah Manns is owed my sincere appreciation of her scrupulous attention to detail, her knowledge and insistence on excellence, and for keeping me focused on my priorities. Dr. Manns was the voice of reason during tenuous moments, always offering the practical support to push me on through to completion. I could not imagine a better mentor. Thank you, Dr. Fickenscher and Dr. Sherman for your feedback and encouragement. The support from my research committee was truly a precious gift.

To my extended family of siblings, aunt, uncles, cousins, nephews and nieces for their loving support, a special thanks for having taken over the tender loving care of my children when I was researching or writing. Their absolute belief in me, and loving reminders of my assured success was the strength behind my strength to complete my dream mission.

Dorita Peer has earned my gratitude forever because her magnificent editing enabled my words to bring my ideas to the light in the most meaningful way. She claims I made her feel incredibly useful. In turn, her presence in my world made me believe that anything was possible.

To my beloved in-laws, Maria and Angelo DeAngelis, thank-you with all my heart for always being there for me with your bountiful table, for loving and tending to my children like your own, for making things easier for us, and giving me the space and time to complete my work.

My parents, Vittoria and Pasquale Ventrella, who had the courage to immigrate to Canada with just a few dollars in their pockets, but all the perseverance and energy to make their dreams come true, were perfect role models for me. Their unconditional support and love carried me through every step of this endeavor. For adoring and welcoming my children always, there are not enough words to thank them.

My sons, my blessings, Angelo, Juliano and Michael -- my wonderful muses. All those nights they lay in bed next to me as I worked, and whenever I looked over at them, or felt their arms around me, I knew what all my efforts were really about: to grow into the kind of mother, teacher and mentor who could be as inspiring to them as they always are to me. Your love, enthusiasm and understanding were priceless gifts. I promise to return these gifts as I watch each of you along the way chase your own dreams.

Last and foremost, the place of honor goes to my husband, John, for whom I have the greatest admiration, knowing he had to reinvent himself during the new and bigger demands made on our family by my academic life. He was my pillar whenever I was too tired and too busy. He was rock for me whenever I felt like packing my studies in. He gave our lives a center of balance like no one else could, and I hope he knows that I always love and honor him more than I can ever say.

“Dare to dream big, and you can make it happen."

**Table of Contents**

Acknowledgments iv

List of Tables

List of Figures

CHAPTER 1. INTRODUCTION 1

Background of the Problem 1

Statement of the Problem 4

Purpose of the Study 5

Significance of the Study 6

Research Design 8

Research Questions and Hypotheses 10

Assumptions and Limitations 11

Definition of Terms 14

Expected Findings 17

Organization of the Remainder of the Study 18

CHAPTER 2. LITERATURE REVIEW

Introduction to the Literature Review 19

Theoretical Orientation for the Study 19

Review of Research Literature and Methodological Literature Specific to the Topic or Research Question 23

Synthesis of the Research Findings 34

Critique of the Previous Research 36

Summary 39

CHAPTER 3. METHODOLOGY

Purpose of the Study 40

Research Design 41

Target Population and Participant Selection 42

Procedures 43

Instruments 44

Research Questions and Hypotheses 44

Data Analysis 48

Ethical Considerations 49

Expected Findings 50

CHAPTER 4. RESULTS

Introduction 52

Description of the Sample 55

Summary of the Results 57

Details of the Analysis and the Results 58

Conclusion 60

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

Introduction 61

Summary of the Results 62

Discussion of the Results 66

Discussion of the Conclusions 69

Limitations 70

Recommendations for Future Research or Interventions 73

Conclusion 74

REFERENCES 75

**List of Tables**

Figure 1. Flow Chart of Participant Recruitment 55

## Table 1. Distribution of Mean Gender, Education, Leadership Title and Culture 57

**List of Figures**

Figure 1. Flow Chart of Participant Recruitment 55

Figure 2: Distribution Mean: Gender, Education, Leadership, Title and Culture

**CHAPTER 1**

**Background of the Problem**

“Seeing the familiar in the novel and the novel in the familiar is a way to ensure that our minds are active, that we are involved, and that we are situated in the present” (Langer & Moldoveanu, 2000, p. 222).

It is only when we’ve awakened that we realize how much of our lives we’ve actually slept through. (Langer, 2005, p. 16)

Many corporations and organizations are looking for ways to be more competitive in the global market, increase productivity and create optimal environments for their employees. This goal has inspired many researchers and administrators to learn more about what motivates employees to allow this shift. There has been some study with corporations and organizations on mindfulness, reflective practice and creative novelty (Jordan, Messner & Becher, 2009; Ray, Baker, Plowman, 2011; Langer, 1997; Langer & Moldoveanu, 2000; Langer, Beck & Janoff-Bulman & Timko, 1984; Puccio, 1999; Gillebaart, Förster, Rotteveel & Jehle, 2013).

“Effective leaders embody the spirt of creativity” (Puccio, Mance & Murdock, 2011, pp. 14). Creativity impacts each part of an organization, from leaders to employees, in developing novel and useful products (Puccio, Mance & Murdock, 2011; Amabile, Schatzed. Moneta & Kramer, (2004). From a survey of 1,500 Chief Executive Officers from 60 nations and 33 industries, IBM’s 2010 Global CEO study found that the most critical factor for future success is “*creativity*”. Creativity in leadership is central to sparking change and generating a vision that engages, unites, motivates and empowers people (Kotter & Cohen, 2002). Creativity does not occur automatically; leaders and organizations need a culture that encourages creativity. Creative thinking is not a talent, but a skill that can be learned (DeBono, 1994).

In the current competitive global economy, organizations are seeking ways to improve productivity while maintaining the optimal well-being of their employees. Mindfulness reflective practice and creative novelty are gaining attention as innovative approaches to improve organizations’ productivity (Siegel, 2011; Langer, 2016; Puccio, Mance & Murdock; 2011, Jordan, Messner & Becher, 2009; Langer & Moldoveanu, 2000; Burnett, 2015). Mindfulness is important for its numerous benefits in the business world. Business leaders have espoused mindfulness not only because it enhances leadership skills, but also because it improves physical and mental health well into the ages of 60 and 70, including reducing blood pressure (George, 2010). Bill George, professor of business at Harvard, Board member of Goldman Sachs Group Incorporated, Exxon Mobil Corporation and Novartis AG has cited the gains made through mindfulness practice; “meditation has been the single best thing that has happened to me in terms of my leadership” (2010). As a result of meditation classes at Hughes Aircraft and Deutsche Bank, employees have reported improved health, well-being and greater focus on work (Cullen, 2006).

Creativity is considered the most desirable 21st century skill and vital to the life of an organization (Pink, 2005); therefore, successful leaders recognize that creativity is critical in any kind of organizational environment (Amabile, Schatzel, Moneta & Kramer, 2004). Reduced creativity diminishes opportunities for creative novelty from which new ideas about products, services, practices or procedures spring (Amabile, 1996; Gehani, 2011; Shalley, Zhou, & Oldham, 2004). Castro, Gomes and DeSousa (2012) believe that leadership in relation to creativity is an understudied issue especially with regard to how leaders impact followers’ creativity. When organizations embed familiar routines, the result can be mindless leadership which perpetuates outdated behavior and suffocates followers (Ray, Baker & Plowman, 2011). Novel ideas and creativity come from a greater understanding of oneself, leading to more adaptability (Grivas & Puccio, 2012). Successful leadership needs to promote creativity, novelty and innovation to forge new ideas and differentiate from competitors.

Creativity needs to include generating ideas and products that are: (a) relatively novel, (b) high in quality and (c) appropriate for the task at hand (Sternberg, O’Hara & Lubart, 1997). Creative novelty is the capacity to develop new, effective, high quality ideas and gain acceptance of them within and outside of the organization (Matthew, 2009). Organizations need leaders who allow employees the freedom to propose creative novelties (Wang & Casimir, 2007). When there is supportive leadership, employees become more inspired (Mattisen, Einarsen & Mykletun, 2012). In an environment of psychological safety and trust, employees have opportunities for novel ideas and reflection (Yukl, 2012).

The main concern for organizations in the global economy is the lack of preparation for fostering creativity (Friedrich, Mumford, Vessey, Beeler & Eubands 2010). A clear connection has been made in the research literature on the positive impact of creative novelty among leaders (Baer, 2012); Langer, Falk & Capodilupo, 2004; Amabile,1996; Puccio, 2011). Although some studies show a positive relationship between leader’s emotional intelligence and creativity (Castro, Gomes & DeSousa, 2012), the ways to promote these skills are not addressed. Research is unclear concerning what is learned from reflective practice and limits a framework from which knowledge can be developed (Walkerden, 2009). What research has clearly shown is that mindfulness has a positive impact on health, well-being, job satisfaction and reduces burnout (Pache, Luthans & Haar, 2014; Ryan & Brown, 2003; Leroy, Anseel, Dimitrova & Sels, 2013); Langer, Hefferman & Kiester, 1988; Kabat-Zinn, 2003); but, what studies have not synthesized is mindfulness with reflective practice and creativity among leaders.

The purpose of the study is to determine whether there is a difference in creative novelty in leaders after an intervention of mindfulness reflective practice. From the results of this study, the evidence-based practice of mindful reflection may gain in use by leaders of organizations. It is also apparent from the results that other interventions that promote creative novelty still need to be studied (post-study). The risk of not providing an intervention that promotes creative novelty is stagnation among leaders and employees in organizations, which results in few innovative products to meet the needs of the current global economy (Puccio, 2011). The study aims to provide valuable information on each variable, contributing to the literature by providing a unique intervention that leaders are able to implement immediately to promote creativity.

**Statement of the Problem**

Creativity linked to leadership is an understudied issue (Castro, Gomes & Sousa, 2012). Leaders who habitually act mindlessly develop patterns that stifle creativity (Langer, 2005), and perpetuate outdated behavior and familiar routines that suffocate followers (Ray, Baker & Plowman, 2011), despite that studies have shown that creativity is a desirable skill in the 21st century for the life of an organization (Pink, 2005). The evidence shows that creative novelty among leaders regarding interventions is an understudied issue (Castro, et al., 2012). If leaders had sufficient evidence regarding how to foster creative novelty, the practice of effective, mindful reflective interventions could become an integral feature of organizational policy.

**Purpose of the Study**

The purpose of this study is to determine whether there is a difference in creative novelty among leaders after implementing a mindfulness reflective practice intervention. The benefit of using an evidence-based intervention which promotes creative novelty is that it will enable leaders to elicit and accept innovative, effective and high quality ideas (Matthew, 2009). Creative leaders have the innate ability to develop practical and useful novelties and guide followers’ creativity (Puccio, Mance & Murdock, 2011). Leaders value the importance of leading social change by engaging and aligning perspectives to motivate and inspire people in meeting their goals (Kotter & Cohen, 2002). By developing novel distinctions, leaders foster a greater sensitivity to the environment, more openness to new information, the creation of new perspectives, and innovative problem solving ideas (Langer & Moldoveanu, 2000). Creating something novel is central to entrepreneurship that builds and sustains companies and generates competitiveness in the global economy (Amabile & Khaire, 2008). Creative novelties are critical to meeting and adapting to organizational needs and changes (Mumford & Gustafson, 1988). Creative leaders can inspire and challenge others to engage in problem solving in unique and flexible ways by thinking differently, thereby facilitating the adaption to change in organizations.

**Significance of the Study**

More research needs to be done on ways of implementing, utilizing and promoting creativity in order to clarify exactly how an individual can exercise creativity (Chen, 2012). Organizations can support leaders in recognizing the importance of creativity, and by promoting the formulation, and supporting the execution of, strategies to foster creativity (Pryor, Singleton, Taneja & Toombs, 2010). While creative leaders have identified the value of mindfulness on creativity to enhance leadership skills (Ray, Baker, & Plowman, 2011), the current focus of interventions on senior, middle managers or front-line employees in isolation is not sufficient. The development of organizational mindfulness could be incorporated in all aspects of the organization, from top administrators, harmonized across all levels, and translated into action (Ocasio, 2011; Vogus & Sutcliffe, 2012; Langer, 1989). By implementing mindfulness techniques among followers, leaders instill presence in the moment (and greater focus) and reduce levels of employee stress (Morledge, Allexandre, Fox, Fu, et al. 2013; Fjorback, Arendt, Ombol, Fink, & Walach, 2011; Carmody, Baer, 2008).

This study may contribute to the generalization of mindfulness theory as it relates to mindfulness reflective practice and creative novelty in leaders, and may provide data to augment creativity. Leaders gain a greater awareness after meditation and self-reflection, which leads to creative novelty production. Furthermore, by providing opportunities for reflection, colleagues can exchange feedback, which stimulates greater creative novelty (Morgan, 2009). Researching mindfulness reflective practice and creative novelty may help to validate mindfulness theory and the importance of creative novelty.

The most creative and effective business leaders are those who are the most flexible and responsive to constant change (Puccio, Mance & Murdock, 2011). Mindful and creative leaders are optimistic and self-fulfilled while developing the core competencies of communities and they are able to stay competitive with any financial and environmental shifts in the economy (Gehani, 2011). In addition to business leaders, non-profit organizations that utilize creative resources are better able to meet the greater needs of the community. Greater creative novelty, productivity and performance can result in more economic adaptation to fiscal restraints in non-profit organizations and improved quality of life in communities (Hilton, Balloun & Weinstein, 2005). This study may demonstrate that mindfulness intervention can stimulate creative novelty in other sectors besides business, and could ultimately benefit the community as well as the economy.

Mindfulness reflective practice has a significant impact on creativity, attunement, reflection and presence in classroom settings. When mindfulness practices were implemented in university classrooms, students transitioned more easily in class, engaged in the moment and in the learning process, concentrated and processed information, experienced decreased stress and improved their creativity (Salvik, 2014). Students learn best through mindfulness awareness of distinctions and when tasks are broken down into mindful tasks (Langer, 1997). Attention and awareness are more dynamic when mindfulness skills have been learned (Schoeberlein, 2009). Research on mindfulness has already shown improvements in classroom management, teacher-student relationships and instructional strategies (Albrecht, Albrecht & Cohen, 2012). When social work students practice mindfulness, they gain greater regulation of their emotions, more openness to diverse perspectives, increased empathy and more awareness of self-care, which ultimately improves their skills as social workers (Napoli & Bonifas, 2011). With graduates flooding different fields of employment, a basic understanding and ability to use this practice can further enhance creativity on the job.

This study will contribute to the literature of mindfulness theory and creativity by helping leaders recognize the importance of creativity, formulating and supporting the execution of interventions, thereby aiding in reducing stress, increasing self-awareness and stimulating creativity in employees and within the organization. As mindfulness has a positive effect in various leaning environments, this study could benefit (and could be generalized to) larger systems such as businesses, non-profit organizations and education systems.

**Research Design**

A quasi-experimental research design was used with a pre-test and post-test, and the Langer Mindfulness Scale (1997). The independent variable is mindfulness reflective intervention. The dependent variable is creative novelty as measured by the Langer Mindfulness Scale (Langer, 1997). The Langer Mindfulness Scale was designed to measure creative novelty, novelty producing, attentiveness to context, and flexibility in thought and behavior.

Purposive sampling uses direct selection techniques to find subjects based on predefined criteria (Oliver, 2006). Participants were recruited from leaders at a cancer support clinic and two child and family mental health agencies. All participants received four weeks of mindfulness reflective intervention. The intervention included instruction on mindfulness skills from Dr. Rockman’s (2012) *Breathing space: 5 meditations* [Audio CD]. The intervention lasted 60 minutes. Leaders participated in a 30 minute meditation, and had the opportunity to reflect for 10 minutes afterwards, and then shared with the leadership team their experience. The reflection provided an opportunity to brainstorm without judgment and develop divergent analytical skills, critical skills, and creative perspectives. At the end of the four weeks, the participants completed the post-test of the Langer Mindfulness Scale. The pre and post-test was analyzed using t-tests to compute scientific evidence of the difference between mindfulness reflective practice and creative novelty among leaders after a four week intervention.

Langer, Pirson and Delizonna (2010) concluded that the Langer Mindfulness Scale has good internal consistency, test-retest reliability and good discriminate and convergent validity. Pirson, Langer, Bodner and Zilcha (2012) administered the Langer Mindfulness Scale to nine sample groups with a total of 4,345 responses. The authors concluded that the scale was reliable as it replicated consistently in 5 different samples. DeVellis (2003) measured that the coefficient alphas’ reliability estimates of the entire scale ranged from .83 to .9 across samples two to seven and remained stable over subsequent time periods in sample six and sample seven. Convergent validity was established by examining the relationship between the Langer’s Mindfulness Scale and conceptually similar meditative mindfulness constructs, which showed the expected positive correlation. The scale utilized a cross-sectional, two-wave and multi-wave longitudinal data that included 4, 345 observations from 3,913 participants in 9 separate studies (Pirson, Langer, Bonder & Zilcha, 2002). The results of the rigorous process of psychometric analysis and expert’s conclusions found that LMS is psychometrically valid with three dimensions and strong internal consistency.

In summary, the study used a quasi-experimental research design with a pretest and posttest application of the Langer Mindfulness Scale (1997), with the independent variable of mindfulness reflective intervention and the dependent variable of creative novelty. The sample population consisted of leaders in cancer support centers and mental health organizations. The participants underwent a four week mindfulness reflective intervention, consisting of a 30 minute mediation, 10 minutes of reflection and then debriefed the experience with the team; the total intervention lasted 60 minutes. The Langer Mindfulness Scale (1997), with good internal consistency and test-retest reliability is expected to have a positive correlation to similar meditative mindfulness constructs.

**Research Questions and Hypotheses**

The main research question guiding the study is:

Q1: Is there a difference in creative novelty among leaders after implementing the intervention of mindfulness reflective practice as measured by Langer’s Mindfulness Scale (Langer, 1997)?

The hypotheses guiding the study are:

H1: There is a statistically significant difference between the intervention of mindfulness reflective practice and creative novelty in leadership as measured by Langer’s Mindfulness Scale (Langer, 1997).

H0 There is not a significant difference between the intervention of mindfulness reflective practice and creative novelty in leadership as measured by Langer’s Mindfulness Scale (Langer, 1997)

**Assumptions and Limitations**

All research has some assumptions that are so basic that without them the research problem itself could not exist (Leedy & Ormrod, 2010). The first assumption of this study is that the sample answered the Langer Mindfulness Scale (1997) honestly (Leedy & Ormrod, 2010). It was assumed that participants needed to be informed of their role in the research so they could make an informed decision and protect themselves when consenting to participate (Lynoe & Hoeyer, 2005). Quantitative research is interested in the relationship between variables; therefore, the research presumed that each variable was measurable and that the study objectively analyzed the variables in terms of numeric significance (Leedy & Omrod, 2010). It is assumed that researchers took an objective stance and did not consider her views on the research. Langer’s Mindfulness Scale (1997) has been tested for reliability, and the presumption is that the research was ethically and professionally conducted (DeVellis, 2003). It was assumed the study’s objective was to attempt to answer the research question.

The variables in the research were all operationalized, it was assumed that the definition assisted in reducing confusion and gave meaning to the variables. An operational definition describes or defines a variable in terms of the operations used to produce it or techniques used (Harmon & Morgan, 1999). Each variable was explained to the participants. The variables in the research were tested, and it was assumed that the study would test if there were a difference with mindfulness reflective practice and creative novelty.

There are limits to the findings and interpretations in a quantitative research approach (Choy, 2014). A limitation of the study was that it relied on the participants to self-assess each question on the Langer’s Mindfulness Scale (1997). The relationship between self-assessing and the external measure did not take into account that any individuals in the study could possibly be a poor self-assessor (Ward, Gruppen & Regehr, 2002). There were no instructions on the definitions or interpretations of each question on the LMS survey; therefore, the study could not rule out or control the interpretations of each variable.

It is impossible to eliminate measurement errors in research; yet, it is important to reduce the number of errors (Fadnes, Taube, & Tylleskar, 2008). For example, among the potential problems in self-assessment is the tendency to see oneself in a favorable light in order to impress management, which can impact on how a participant completed the questionnaire (Raphael, 1987). In addition, the time elapsed between the beginning of the intervention to when participants completed the post-test questionnaire could have affected recall of events and impacted the results (Fadnes, Taube & Tylleskar, 2008). As well, participants do not all respond in the same way to mindfulness reflective intervention and may have interpreted their experiences and meaning of the constructs differently. Participants within each group may have impacted each other differently after mindful meditation and the exchange that followed; therefore, it cannot be assumed that the results of the research are the same for all groups of leaders.

The type of purposeful sampling is a limitation of the study. Participants were chosen because they were leaders from three specific organizations. The population was identified based on sample characteristics and relevant eligibility criteria (Polit & Beck, 2010), thus, it prevents the generalization of the results to all leaders. Replication of participants adds to the sample size and can enhance generalization as well as statistical power (Polit & Beck, 2010). Purposive sampling limits the application of the study results in general, but duplication of the research is a way to expand the application of the intervention.

The length of the study was limited to four weeks and may prove not enough time to develop creative novelty among the participants. All leaders have the capacity to be mindful; therefore, considerable efforts need to be taken to achieve a high degree of mindfulness (Brown & Cordon, 2009). Perhaps, if participants engaged in a longer intervention, they could further develop mindful reflective skills. The duration could also impact the relationships among the participants, and this may affect their willingness to risk proposing novel ideas.

Another shortcoming of the study is that it did not provide an indepth description of the experience the participants experienced during the intervention (Choy, 2014). The study did not measure how much training and/or mindfulness reflective skills the participants acquired before the study. Research indicated that participants with prior meditation experience reported higher scores on mindfulness versus those who did not have meditation experience (Soler, Cebolla, Felie-Soler, Demarzo, Marcelo, Pascual & Rosa, 2014). A variable that may have influenced the study’s assessment of the intervention’s effects on creative novelty is whether participants had prior mindfulness or creative training.

The varying levels of experience that participants had in their respective organizations as leaders in various roles, from front-line supervisors to top executives, would have affected the results (Mumford, Campion & Morgeson, 2007; Jacobs & Jaques, 1987). One implication is that introducing mindfulness reflective intervention may be challenging for leaders who have spent many years in one position, with little opportunity for adapting to change (Yukl & Mahsud, 2010).

In summary, considering the study’s objective was to attempt to answer the research question: is there a difference between the intervention of mindfulness reflective practice and creative novelty among leaders as measured by Langer’s Mindfulness Scale (Langer, 1997), the study assumed that participants freely consented, answered questions honestly, that the variables were measurable, and that Langer’s research had been conducted objectivity and ethically. The limitations of the study include casual inferences owing to self-assessment, interpretations and responses that could have varied, differing levels of experience among the participants, the small sample size and duration of the intervention.

**Definition of Terms**

*Creativity.* Creativity is defined as the production of novel, useful ideas; or solutions to problems in order to serve a purpose (Puccio,, 2006; Amabile, 1983; Stein, 1974). The common theme in definitions of creativity is that the creator has a relationship with the process, and the product is novel and useful to the environment (Langer, 2003).

*Creative Leadership.* Deliberately engages one’s imagination to define and guide a group toward a novel goal in a direction that is new for the group (Puccio, Mance & Murdock, 2011).

*Creative Novelty.* Novelty is defined as that which was discovered or created following something that was unknown at a particular point in time (Witt, 2009). Creative novelty is defined as that development of new, effective, high quality ideas which are useful to an organization (Matthew, 2009).

*Emotional Intelligence.*  The individual-difference ability applied to perception and expression of emotion, use of emotion in thought and reasoning, and self- and other-emotional regulation (Antonakis & Dietz, 2010, pp.165)

*Engagement.* The extent to which we notice details about our environment and we relate to it (Langer, 2015).

*Flexibility.* Flexible people welcome a changing environment rather than resist it (Langer, 2004).

*Leadership.* Leadership can be described as a fundamentally social influence process that culminates in reaching mutual goals with the leader's constituents. It involves making sense of a situation, determining the team's objectives, motivating people to work together to accomplish these objectives, and influencing team culture (Russell, 2006).

*Meditation.* “The intentional self-regulation of attention from moment to moment” (Kabat-Zinn, 1982, p. 34.)

*Mindfulness.*  Mindfulness is an active state of awareness that situates context in the present and is guided (not governed) by rules and routines (Langer, 2009; Langer, 1997: Langer, 1989) whereas mindlessness lacks conscious control of actions that go largely unquestioned (Langer, 1989). Mindfulness is awareness that comes from paying attention to the present moment and suspending judgment as the experience unfolds (Kabat-Zinn, 2003).

*Novelty.* Novelty is something that was unknown before a particular point in time and was discovered or created at that point in time (Witt, 2009).

*Novelty Producing.* The degree to which we tend to produce new information, to understand out situation (Langer, 2015.

*Novelty Seeking.* Novelty seeking provides an opportunity to learn something new; those who are highly engaged notice more details about a specific relationship with the environment (Langer, 2004).

*Reflective Practice.* Reflective practice is a metacognitive process that allows access to a larger set of perceptual resources (Epstein, 1999). Reflective practice focuses attention on an issue, situation, problem, question or creative product, inspire an openness to connecting with others in new ways (Waddock, 2010), and focuses on the way in which a person reconstructs the meaning of what has been planned, observed or achieved (Hooper, 2010).

*4 P’s of Creativity. Person.* The person impacts the creative process (Rhodes, 1961). Persons or creators who excelled in performing arts, design, education or some other artistic talent (Kaufman, 2009).

*P*rocess. The creative process is the muse or sense of inspiration (Loori, 2005), and gives the artist, inventor, designer, problem-solver, and teacher or leader free expression of thoughts, emotions and reflections and values the building blocks of the process over the end product.

*Press.* The relationship a person has to the environment. Press is interconnected with family values, tradition, culture, organization as the exchange between the person and their environment, and recognizes that societal influences have a significant impact on creativity (Rhodes, 1961).

*Product.* Product that is useful in the social context, and which is easy to measure because there is a tangible end result (Rhodes, 1961; Amabile, 1988rt).

*Transformation.* Transformation begins with a disorienting dilemma or event that causes an individual to question his or her assumptions or long held beliefs.

*Transformative Learning.* Transformative learning is a “process by which we transform our taken-for-granted frames of reference to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action” (Mezirow, 2000, p.7).

**Expected Findings**

The study was expected to show a statistically significant correlation between the intervention of mindfulness reflective practice and creative novelty in leadership as measured by Langer’s Mindfulness Scale (Langer, 1997). The research findings may provide a template for leaders to learn about the relationship between creative novelty and mindfulness reflective practice. By utilizing the results of this study, research may support future interventions of mindfulness reflective practice in organizations to promote creative novelty, thereby preventing familiar routines and mindless leadership models (Ray, Baker & Plowman, 2011).

**Organization of the Remainder of the Study**

The following chapter will include a literature review on mindfulness theory, creativity, reflective practice, leadership and creative novelty. By synthesizing previous research, implications for this study and future studies can be suggested. The methodology will be clearly highlighted. After the research intervention was completed, the data was analyzed, and results provided new information to the literature.

**CHAPTER 2. LITERATURE REVIEW**

**Introduction to the Literature Review**

The purpose of this study is to determine whether a mindfulness reflective intervention is effective in increasing creativity novelty among leaders, as there is a lack of research in this area (Chen, 2012; Amabile, Conti, Coon-Lazenby & Herron, 1996). There are clear benefits to mindfulness such as a physical link between mindfulness and higher use of prefrontal cortical activation and reduced amygdala activation in response to stress (Creswell, Way, Eisenberger & Lieberman, 2007), thereby creating a state that reduces stress. Evidence-based research has proven the effectiveness of mindfulness.

The data search for this study contained the following keywords: creativity, mindfulness theory, reflective practice, creative novelty and leadership. The library sources that were used to explore the concepts noted above included a) Proquest, b) the Cochrane library, c) MEDLINE (OVID), d) EBSCO, and e) the Academic Search Premier. The articles found were examined for content and relevance to this study.

**Theoretical Orientation for the Study**

This study is based on mindfulness theory concepts that were developed in the East and imported to the West (Janaka, & Balu, 2014). According to Indian Buddhist and Chinese Taoist traditions that date back 3000 years, meditation was a pathway to enlightenment (Shapiro, Walsh & Britton, 2003). Mindfulness practices can be traced back to at least early fifth-century B.C. to Siddhartha Gautama, the Buddha (b.563 B.C.). Buddhism is a purposeful ongoing exploration of one’s mind, intention and actions, and how one perceives the world (Mahathera, 1990). The transcription of the oral teachings of Buddhism made mindfulness concepts and practices accessible worldwide (Rosenzweig, 2013). The four fundamental concepts of Buddhism based on “bareness of attention,” which lays the groundwork for mindfulness which are (a) the organization and identification of mental confusion, (b) the non-coercive nature of bare attention, (c) the capacity to slow down the mental process, and (d) the gaining of direct visualization through the baring of attention (Nyanaponika, 1972).

One of the essential components of mindfulness is how it affects attitude, cognition and behavior. Awareness is developed by deliberately paying attention to the present moment without judgment and allowing the experience to unfold (Kabat-Zinn, 2003). Mindfulness is a teachable psychological state that can be nurtured by taking responsibility for attention and attitude (2003). The process of mindfulness begins by organizing thoughts, ideas and perceptions without judgment or suppression (Nyanaponika, 1972). Slowing down thoughts can provide a greater quality of attention that reduces interference from emotions, judgment, impatience and promotes a broadening of perceptions.

Eastern practices have demonstrated how holistic healing involves connecting to one’s thoughts, emotions, body and spirit (Hanh, 1976), an aim supported by Western practitioners such as Jon Kabat-Zinn, a medical doctor and biochemist. Along with colleagues in as early as 1970, Kabat-Zinn developed and applied mindfulness-based stress reduction (MBSR), which was practiced in an outpatient stress reduction clinic at the University of Massachusetts Medical Centre. Kabat-Zinn (1982) noticed that many of his patients were suffering from stress and chronic pain. The findings of his research team indicated that patients improved in the ability to cope with chronic pain and stress, once introduced to mindfulness meditation (Miller, Fletcher & Kabat-Zinn, 1995; Kabat-Zinn & Massion, Kristeller, Peterson, et al. 1992). A one year study concluded that MBSR improved mood in fifty cancer patients who continued to maintain diminished stress levels, decreased cortisol levels, improved immune systems and lowered blood pressure (Speca, Carlson, Goody & Angen, 2000). The foregoing studies added evidence that mindfulness could be taught directly as a form of meditation (Claxton, 2005) adapted from Buddhist roots.

Langer supported previous findings that showed mindfulness as a psychological construct is both a state and a trait, a product not a process (Langer, 1989). Her book *Mindfulness* (1989) expanded the concepts to include how mindfulness amplifies how novelties are perceived. According to Langer and Moldoveanu (2000), those in a mindful state have four distinguishable revelations: (a) a greater understanding of their environment, (b) more openness to new information, (c) new classifications of structures from their perspective, and (d) heightened awareness of problem-solving. According to Langer (1998), mindfulness is actively engaging with and reconstructing the environment, and creating categories by giving attention to the moment. Mindfulness is an active state of awareness that situates context in the present and is guided (not governed) by rules and routines (Delizonna, Williams, Langer, 2009; Langer, 1997: Langer, 1989) whereas mindlessness lacks conscious control of actions that go largely unquestioned (Langer, 1989).

Siegal (2010) defines mindfulness as having awareness by intentionally paying attention to the present moment without allowing judgment. Focusing attention in a mindful way is a biological process that promotes health as a form of brain hygiene (2010). There is evidence that mindfulness practice changes the brain by increasing thickness in cortical areas responsible for sensory, cognitive and emotional processes (Lazar, Kerr, Wasserman, Gray, et. al., (2005). Brain scans indicated that mindfulness activated neuroplasticity (Siegal, 2010). Mindfulness practice reduced limbic reactivity and expanded the possibility of observing and exploring the moment with oneself and others McCown, Reibel, Micozzi, 2010). In even as short as eight-week Mindfulness Based Stress Reduction program, anxiety and negative affect were decreased, and positive affect was increased (Davidson, Kabat-Zinn, Schumacher, Rosenbranz, Muller, Santorelli, et al., 2003).

Mindfulness theory has been expanded to include traits in cognitive domains, specifically: novelty producing, novelty seeking, flexibility and engagement (Langer, 2001). Novelty seeking, novelty producing and flexibility involve openness and curiosity facilitated by engagement with one’s environment (Bodner & Langer, 2001) and an active creation of new categories (Langer, 1989). Flexibility also refers to the ability to view experiences from multiple perspectives and to use feedback from the environment in order to adapt.

Mindfulness theory has been applied to business, education and social services. Langer’s (1989) research found that mindfulness intervention led to creative teamwork that overcame the initial effort of the novel task (Grant, Langer, Falk & Capodilupo, 2004). With improved perspective comes improved performance (Lieberman & Langer, 1997, Langer, Hefferman & Kiester, 1988). Studies of mindfulness in a business context have shown that mindfulness increases creativity and decreases burnout (Langer, Hefferman & Kiester, 1988). One study in an educational context asked students to make their material meaningful rather than memorize it, resulting in better retention of lessons and increased creativity in essay writing (Lieberman & Langer, 1997). When children, college students and the elderly were asked to notice new things mindfully, they exhibited greater attention to stimuli, enjoyed performing tasks better, and showed improved memory (Langer & Bodner, 1995; Langer, Carson & Shih, in press).

Understanding the evolution of mindfulness theory from East to West provides a framework for research on interventions. Mindfulness can provide many benefits such as being present in the moment and the environment with greater awareness, improved mental flexibility and engagement of attention that promotes novelty seeking, novelty producing; and most importantly, physiologically changing the brain. Research has shown that mindfulness has been effectively applied to both micro and macro systems. Langer’s definition of mindfulness was be the theoretical framework for the study.

**Review of Research Literature and Methodological Literature   
Specific to the Topic or Research Question**

**Creativity**

The definition of creativity is the production of novel, useful ideas or problem solutions that service a purpose (Puccio, Murdock & Mance, 2005; Amabile, 1983; Stein, 1974). The main theme in many of the definitions of creativity is the creator has a relationship with the process, and the product is novel and useful to the environment (Langer, 2005; Sternberg & Lubart, 1995; Weisberg, 1986).

Creativity allows ideas from multiple sources to be linked, and unknown areas to be explored for unique approaches to problems or tasks by seeking novelty (Gilson & Shalley, 2004). Creativity is the development of original ideas that are useful or influential (Runco, 2004). Creativity is defined as “the how (ability and process), the where and when (environment) made by the who (individual or group) making the what (a specific product) both new and useful” (Runco, 2004, p. 52), with the product needing to be novel and useful in a social context (Plucker, Beghetto & Dow, 2004). Recurring themes in the literature suggest that creativity implies going above and beyond the regular patterns of generating ideas products (Sternberg, 2006; Amabile, 1996 & Wiener, 2000).

Rhodes’s (1961) four P’s model of creativity encompasses a summary of the above definitions of creativity. The four P’s of creativity consist of 1) person, 2) process, 3) product and 4) press influence (creative environment). The research on creativity focused on unique persons or creators who excelled in performing arts, design, education or some other artistic talent (Kaufman, 2009), or inventing, designing composing, planning and developing (Guildford, 1950), leading to the creation of novel products. Creativity is achievable by any individual who can effectively respond to any new situation with creative expression in a conducive environment (Amabile, 1996) and anyone could have the potential to be creative when engaging in a task (Langer, 2005).

The creative process occurs when individuals and teams develop creative ideas as they respond to predicaments and opportunities (Puccio, Mance, Switalski & Reali, 2012) The creativity of a group does not credit one person; all members contribute and it is the interactional dynamics that conclude the end result (Sawyer, 2007). Sawyer (2007) believes that creative ideas emerge from “collaborative webs, not from the minds of lone creators” and proposes that creative teams and organization not work in isolation when being creative and innovative. The process is not concerned with the end product; instead, it stimulates everyone onward to the destination. The creative process becomes the muse or sense of inspiration (Loori, 2005) whereby the leader has free expression of thoughts and emotions and values the building blocks of the process over the end product. By generating a useful product in the social context, the product is measurable as there is a tangible end result (Amabile, 1988), which was developed as a result of creative people and processes.

Rhodes (1961) refers to *press* as the relationship a person has to the environment. Press is interconnected to family values, tradition, culture, organization as the exchange between the person and their environment, and recognizes that societal influences have a significant impact on creativity. The environment can have a positive or negative impact on creativity (Puccio, Mance, Switalski, & Reali, 2012; Runco, 2007), as some environments are more supportive than others.

The literature on creativity demonstrates that creativity is connected with the person, process, product and environment that influence the end results (Rhodes, 1961; Puccio, Mance, Switalski & Reali, 2012). The literature was explored for definitions of creativity and the definition chosen for this study was Langer’s (2005) for its relational connection to the person and product. Creativity cannot be understood in isolation, but only from an ecological perspective with an aim for its usefulness to the social group.

**Creative Novelty**

Creative novelty is defined as something that was created or discovered at a point in time based on what was unknown before (Witt, 2009). Creative novelty involves the development of new, effective, high quality ideas which are useful to an organization (Matthew, 2009). Creative novelty generates a vision for social change by engaging and aligning perspectives, and motivating and inspiring people to meet their goals (Kotter & Cohen, 2002).

Novelty seeking provides an opportunity to learn something new; those who are more actively engaged with the environment notice more specific details (Langer, Falk, Capodilupo, 2004; Bonder & Langer, 2001). Creative novelty occurs when flexible people welcome a changing environment rather than resist it (Langer, Falk, Capodiluopo, 2004), and, inflexible and non-creative organizations will fail to stay competitive (Catling, 2007). Creative novelty provides a competitive advantage and promotes organizational development, whereas limiting novelty can stagnate employees’ performance and diminish effective response to environmental change (Knowles, 1990).

**Leadership**

The greatest leaders are excellent creative thinkers, and work at being creative (Harding, 2010, DeBono, 1994, Puccio, Mance & Murdock, 2011). Leaders foster, encourage and support creativity (Coman & Bonciu, 2014) by providing a conducive work environment with the right structure, climate and human resource practices (Shalley, Gilson & Blum, 2000; Mumford, 2002; Mumford, Scott, Gaddis & Strange, 2002; Oldhan & Cummings, 1996).

Natural leaders can be born; but, with knowledge and skill development, anyone can become a leader (Whitehead, Weiss & Tappen, 2009) by creating new models for responding to situations (Mumford, 2006), and providing the right workplace climate where employees can feel safe to venture into new areas of thought and action (Fawcett, Brau, Phoads, Whitlark, et. al., 2008). Successful organizations develop leaders’ emotional intelligence by enhancing self-awareness, self-management, social awareness and social skills (Feather, 2009), by changing the “reality” in which employees’ work can be defined (Piccolo & Coquitt, 2006), and producing “cheerleaders” who champion creative ideas (Kyvik, Zhang, Romer-Marinez, 2012; Mathisen, Einarsen, Mykletun, 2012; Whitaker & Miller, 2013). When employees’ creative potential or ideas are discouraged, organizations face stagnation owing to diminished creative opportunities (Amabile & Khaire, 2008).

Open minded leaders who appreciate and exhibit traits of wonder and curiosity (Puccio, Mance & Murdock, 2011) create an opportunity to inspire others and encourage relationship with employees who may emulate them (Mattisen, Einarsen & Mykletun, 2012), and in turn emerge as motivated employees (Mumford, Scott, Gaddis & Stranger, 2002). Leaders’ expectations can increase employees’ creativity (Tieney & Farmer, 2004) through generating an organizational culture that values out-of-the-box thinking (Cheng & Wang, 2010; Houghton & Diliello, 2010; Powell, 2008).

A leader who is mindful is fully present in circumstances before responding to situations (Carroll, 2007), lets go of the weight of anxiety through the “muscle of being” (p.61), appreciates others’ views and acknowledges challenges without judgment, and is genuine, which in turn inspires others to become more open. Ten tenets of mindful leaders include: (a) simplicity, (b) poise, (c) courage, (d) confidence, (f) enthusiasm, (g) patience, (h) awareness, (i) skillfulness and (k) humility (Caroll, 2007). Other traits of mindful leaders are stability, flexibility, ability to receive and accept feedback, managerial resourcefulness, openness to experience and conscientiousness, ability to process experiences and construct experiences with awareness and in daily life, valuing self-reflection and understanding, and acceptance of constant transformation (Mellor, 2015; Tanious, 2012; Skjei, 2014; Costa & Kallick, 2008; Goldman, 2010). With highly focused attention, leaders gain optimal performance and flow of the experience (Csikszentmihalyi, 1996), with diminished negative effects in the brain from negative emotions (Creswell, Way, Eisenberger, & Lieberman, 2007) and stress (Kabat-Zinn, 2003), resulting in improved self-regulation and empathy.

Mindless leadership perpetuates outdated behavior that stifles creativity (Ray, Baker & Plowman, 2011) and often organizations rely on familiar routines. Promoting creative leaders and positive moods results in more creative novelties coming from employees (Wang & Casimir, 2007), greater emulation of creative behavior (Mattisen, Einarsen & Mykeltun, 2012), and improved mood and tone of groups, and more effective collaboration and coordination of efforts (Sy, Cote & Saavedra, 2005), from business students who exemplified and were rewarded for creativity during education (Knowles, 1990), Employees increased curiosity and motivation in creative work (Mumford, Scott, Gaddis & Strange, 2002) when leaders’ expectations were heightened (Tierney & Farmer, 2004). Employees who viewed supervisors as supportive of innovation were more likely to rate organizations as an encouraging environment for creativity (Scott & Bruce, 1994); therefore, organizations that recognize the value of creativity in both leadership and followers formulate strategies and provide a conducive work environment for creativity and innovation (Pryer, Singleton, Taneja & Toombs, 2010), and are rated by employees as having supportive supervisors and organizations (Scott & Bruce, 1994).

The research summarized above demonstrates the magnitude of the role of leaders and how developing awareness and mindful leadership contributes to creativity in organizations by demonstrating the influence of leaders on employees in establishing an inspiring environment to express and enhance creativity.

**Reflective Practice**

Reflective practice is a metacognitive process that allows access to a larger set of perceptual resources (Epstein, 1999), which involves an experience upon which one reflects and then has a new experience (Cornish & Jenkins, 2012), and is considered a circular process: on reflection, there is consequential action, more reflection and more action (2012). There are six stages of reflection which consist of: (a) a sense of discomfort, (b) identification or clarification of the concern, (c) openness to new information from internal and external resources (ability to observe and integrate different perspectives), (d) expression and integration (coming together and the making of creativity), (e) establishing continuity of self with the past, present and future, and (f) deciding whether to act on the outcome of your reflection and new awareness (Boyd & Fales, 1983).

Reflection involves critical thinking, which develops a leader’s capacity to make effective judgments (Hooper, 2010) through heightened awareness, which promotes greater receptiveness to feedback (2010), and focus of attention on an issue, situation or problem, inspiring an openness to connect with other in new ways (Waldock, 2010). Reflection allows leaders to compartmentalize experiences into meaningful parts, identify them and synthesize connections among them, which assists leaders in the process of learning to be effective leaders (Stoeckel & Daview, 2007).

The process of creativity is useful, novel and dependent on the person and process, and products that are developed need to connect with the environment. Through creative novelty and an environment of mindfulness, flexibility and acceptance are generated for new ideas. Mindfulness theory applies to reflective practice as the active consequence and expression of the state of mindfulness, which gives rise to new awareness resulting in creative novelty.

**Methodological Literature**

**Creativity and Leadership Methodological Literature**

The trends demonstrating the connection between creativity and leadership indicate that leaders need awareness and a willingness to promote and inspire creativity and emotional intelligence in others. Leaders not only need to be creative but also inspire others to creativity in systems through a belief that the best solutions are often derived from others. Great creative leaders inspire and depend on others to think and behave creatively (Harding, 2010). A creative society is stimulated by creative education, an encouraging environment, natural leadership and multidisciplinary teamwork (Pawlak, 2000) through transformation, either by the education system opening the minds of future leaders (Sisk, 2014) or other systems. Transformation requires time to develop and nurture a deeper understanding of creativity that can revise cultural archetypes and social beliefs (Miller, 2015) and involves all parts of a system.

One technique to promote creativity is brainstorming (Dennis, Minas, & Bhagwatwar, 2013) but ideas need to move to action. Creativity motivates individuals to put ideas into action, network the ideas and form a strong relationship with others’ ideas (Baer, 2012). Creativity combined with emotional competence was a predictor of leading change in army leaders (Matthew, 2009), because the most valued strategy in brainstorming (for creative novelty) is commitment to a mutual goal (Litchfield, 2009), which results in greater average novelty and creativity (Litchfield, Fan & Brown, 2011). Novelty provokes mindfulness, and a relationship has been found between mindful creativity and perceived competence (Grant, Langer, Falk & Capodilupo, 2011).

The role of effective and mindful leaders is to promote awareness in supporting the environment to elicit creative novelty and convert ideas into actions. Research on creativity and leaders found a positive relationship between emotional intelligence and creativity in leaders (Castro, Gomes & DeSouse, 2012; Sanchez-Ruiz, Hemandez-Torrano, Perez-Gonzales, Batey, 2011; Ivcevic, Brackett & Mayer, 2007) who possess skills in self-encouragement, awareness of one’s emotions and impact on others. Successful organizations develop leaders’ emotional intelligence by enhancing self-awareness (Yadav, 2014), which is considered to be twice as important to star performers as cognitive ability (Goleman, 2001), because those who are more self-aware are better in self-management. Self-awareness enables more effective responses to relationships and greater achievement of personal professional goals (Yadav, 2014).

When leaders exemplify self-awareness and emotional intelligence, they promote the same qualities in their followers and set the tone for the organizational environment. It is vital that leaders promote the values of creativity and foster creativity in others. Leaders in educational and other systems need to cultivate creativity as an important value system. Emotional intelligence and awareness are interconnected with the ability to think and behave creatively.

**Mindfulness Methodological Literature**

Mindfulness has been defined as an active state of awareness in the present by paying attention and suspending judgment as the experience unfolds (Langer, Falk, & Capodilupo, 2004, 2009, 1997; Kabat-Zinn, 2003; Seigal, 2010), whereas mindlessness lacks conscious controls of actions (Langer, 1989). Mindfulness can have a positive impact on well-being, creativity, education and health when facing challenges in the workplace (Roche, Luthans & Haar, 2014), and as a resource to leaders to support psychological strength and well-being (2014). An example of an effective mindfulness practice was demonstrated by study participants in emotionally draining jobs working in hospitals, schools, public offices and nursing homes, who made entries in a mindfulness diary twice a day for five days and reported experiencing better job satisfaction and reduced burnout (Hulshefer, Albers, Feinholdt & Lang, 2012). Mindfulness also has been found to improve emotional and physical well-being, improve coping for patients suffering from chronic stress and pain (Miller, Fletcher & Kabat-Zinn, 1995, Kabat-Zinn & Massion, 1992), to decrease stress and psychological functioning, leading to symptom reduction (Carmody & Bear, 2008), including decreased cortisol levels, improved immune systems and lowered blood pressure in cancer patients (Speca, Carlson, Goody & Angen, 2000). The foregoing examples support that mindfulness can promotes health and well-being.

Langer’s mindfulness intervention led to creative teamwork derived from overcoming the initial effort of novel tasks and more efficient product development (Grant, Langer, Falk & Capodilupo, 2004) and increased creativity and decreased burnout in business (Langer, Hefferman & Kiester, 1988). Mindfulness benefits not only business leaders, but also higher education students. Studies with students reported that mindfulness in the classrooms increased awareness, openness, living in the moment, and decreased stress at the pre-and post-measures (Salvik, 2014), and allowed the making of material meaningful, and increased retention and creativity in essay writing (Lieberman & Langer, 1997). In a study on identity and diversity, students introduced to mindfulness reported increased awareness of categorizations and labeling experiences, reactions and judgments of themselves and others regarding oppression and anti-oppression (Wong, 2004). When art-based mindfulness practices were implemented with children who had mental health or child protection concerns, these students reported increased self-awareness, resilience, coping, social skills, and improved self-esteem after 12 weeks (Coholic, 2011), decreased emotional reactivity, anxiety symptoms and stress (Lee, Semple, Rose & Miller, 2008). In a study implementing mindfulness with children, college students and the elderly, participants reported greater attention to stimuli, enjoyment of performing tasks, and improved memory (Langer, & Bodner, 1997, Langer, Carson & Shih, in press). These studies demonstrate that mindfulness fosters a perspective that is able to improve performance (Lieberman & Langer, 1997; Langer, Hefferman & Kiester, 1988), whether in business, mental health or education. The research in leadership with respect to mindfulness and creativity provides evidence that mindfulness is sound practice and has proven benefits for organizations, leaders and employees.

**Reflective Practice Methodological Literature**

Reflective practice promotes transformation and self-awareness in leaders and provides students with meaningful learning by challenging current social, political and cultural conditions (Gursansky, Quinn & LeSueur, 2010). The use of a reflective learning journal helps promotes critical self-awareness in individuals and teams (Loo & Thorpe, 2002) through self-reflection and adaptation to new learning processes. Reflective practice allows participants to deepen learning, promotes greater awareness and develops greater reflection skills through online journaling (2010), learning about leadership and benefits being seen up to three years later (Watson & Vasilieva, 2007). Reflective practices foster deeper understanding and may be a central characteristic of leadership education (Matsuo, 2012). Reflective practice promotes awareness and deepens the meaning of learning.

**Synthesis of the Research Findings**

Research has found that mindfulness and reflective practice enhance creativity (Glaveanu, 2011; Waddock, 2010), as increased awareness and reflecting in a non-judgemental way allows for creative novelty and results in examining ideas from new perspectives (Kotter & Cohen, 2002; Harding, 2010; Pawlak, 2000; Bear, 2012). Organizations with mindful and reflective leaders build opportunities for growth, creative novelty seeking and increased production (Dennis, Minas & Bhagwatwar, 2013). By providing opportunities for intentional work towards creativity (Amabile & Khaire, 2008), leaders are facilitating an environment for mindful reflective practices to enhance new ideas, build new products, and develop outstanding new leaders (Langer, 2005).

Mindfulness is a state of conscious awareness resulting from being in the moment (Brown & Ryan, 2003; Kabat-Zinn, 1994; Langer, Falk & Capodiluopo, 2004), involving the distribution of attentional focus (Davidson & Lutz, 2008; Valentine & Sweet, 1999) and the inhibition of automatic responses (Schmertz, Anderson & Robins, 2009). The ability to reflect and observe is associated with increased cognitive flexibility (Chambers, Gullone & Allen, 2009; Greenberg, Reiner & Meiran, 2012). Flexibility, flowing attention and the ability to reflect are all cognitive mechanisms of creativity (Chermahini & Hommel, 2010; De Dreu, et. al., 2008). Leaders and employees benefit from using mindfulness and reflection (Hooper, 2010), focusing without judgement and meditation (Langer, Falk, Capodilupo, 2004) as part of the creative process. Research has demonstrated that mindfulness interventions have improved individual creativity and creative teamwork, (Langer, 1989; Langer & Moldoveanu, 2000; Cirella, Radaelli & Shani, 2014).

In order to remain competitive with changing demands and the global economy, leaders benefit form a belief in promoting creativity in organizations (Amabile, 1988; Gryskiewicz, 1999; Wooderman, Sawyer. & Griffin, 1993; Langer, 2004 & Loori, 2005), by fostering an environment of risk taking and creativity in employees without fear of retribution (Coman & Bonciu, 2014), an interest in the promotion of new ideas (Blake & Mouton, 1985; Edmonson, 1999) and creative novelties (Wang & Casimir, 2007), which together result in employees feeling invested in tasks and rewarded (Scott & Bruce, 1994) for being part of an innovative and supportive organization (Chandler, Keller & Lyon, 2000).

The literature on creative novelty shows that leaders can directly impact creativity, that mindfulness allows awareness, that reflective practice promotes creativity, that mindfulness allows awareness, and that reflective practice promotes creativity. Mindfulness theory, reflective practice, creative novelty and leadership are interdependent. Organizations without creative novelty are unable to diversify or seek new opportunities are unable to remain competitive (Puccio, Mance, Switalski, & Reali, 2012; Langer, Falk & Capodilupo, 2004), are not innovative in creating new products that are novel and useful to surpass previous product response (Amabile, 1996; Puccio, Mance & Murdock, 2011) and which are recognizable to the respondent (Runco, 2007). This study aims to discover whether the intervention of mindfulness reflective practice makes a difference in creative novelty among leaders.

**Critique of the Previous Research**

Despite the literature providing many studies on mindfulness, reflective practice and creative novelty, there is a lack of research on combining the variables, and how each variable is defined varies in the literature. Factors that need to be considered in the research are: social desirability, the variation of the size of the groups, the duration of the studies, and whether participants had had previous mindfulness and creativity training. The literature provides valuable information, but the criticisms need to be taken into account when considering the results of the research.

Most of the studies reviewed conducted research that only addressed one or two variables in this study; such as, mindfulness, creativity, reflective practice or leadership. For example, Kabat-Zinn’s (2003) and Siegel’s (2003) mindfulness studies only focused on whether mindfulness relieved pain, depression, emotional regulation, and improved working memory. Another study addressed mindfulness and leadership, but not reflective practice or creative novelty in adults and younger children at a baseball camp (Langer, Cohen & Diikic, 2012). Yet another study used subjects who were not leaders to determine whether mindfulness had positive effects on well-being, productivity and creativity in the workplace (Langer, 1989, 1992, 2005; Langer, Hefferman & Kiester, 1988). The aim of this study was to ascertain whether mindfulness would have the same beneficial impact on the performance of leaders.

There was a difference in how the various studies defined the variables of mindfulness, creativity, reflective practice and leadership differently. Some researchers defined mindfulness in the constructs of paying attention, being aware, being non-judgmental and the promotion of deep listening (Kabat-Zinn, 2003; Siegal, 2007a; Siegal 2007b; Siegal, 2009), whereas others build on mindfulness to demonstrate that this concept is an active process (Langer, Falk, Capodilupo, 2004). Langer (2015), conducted seven studies with college students, which questioned if participants were more mindful towards a partner perceived to have a trustworthy face; the weakness of the study was that different cultures interpret what a trustworthy face is differently, which can have implications on how the participants define and interpret the variables, and future researchers who may use the data may also interpret the data differently. Defining variables and cultural awareness in the research is vital for participants to understand and evaluate what they are measuring.

Another limitation of this study is that social desirability may shift the bias and affect results (McCabe & Heerwig, 2009), because social desirability bias indicates that a participant will rate themselves higher owing to the attractiveness of the variable being measured (Hill & Betz, 2005). Each participant may quantify creativity or be attracted to mindfulness in varying degrees, which may impact the results of the research.

Batalo’s (2012) five-week study demonstrated that creative process and mindfulness practice may show more significant results over a longer period, such as a year, which reiterates the concerns about the length of this study. The duration cannot only impact the results but also the sample size, such as Hunter and McCornich’s (2009) qualitative study on mindfulness, which interviewed only eight managers and found that the managers had more internal locus of control, meaning from their work, adapted to change, had more positive relationships and were less concerned about monetary gains, but concluded that such a small sampling cannot be generalizable to all managers.

The use of quasi-experimental groups without a control group was another limitation in most of the research reviewed. The results of many of the studies reviewed would increase in validity if a control group had been used for comparison. Several of the leadership studies did not indicate the gender of the participants, which can represent a bias affecting the results of the study. Another criticism is that the leadership research did not include the number of years the leaders held a position, which would likely have implications on creativity. Although Langer’s Mindfulness Scale was researched and demonstrated high reliability and validity, not all scales used in the literature indicated the reliability of the measuring tool; therefore, it is unclear whether other studies are measuring what intended to be measured. Each of the limitations provides valuable information on how to make a study more valid by ameliorating the research design, by augmenting or diversifying the population, and by looking closely at how to implement and collect data.

The limitations of studies are attributed to any of a variety of factors, including leaders having less interest in creative novelties, preferring to practice familiar modalities without entertaining change, not recognizing the value of creativity nor wanting to be creative (Runco, 2007), having negative connotations about mindfulness or creativity, such as viewing the need for mindfulness as a sign of weakness, loss of control, waste of time, wanting to take on the tasks themselves, or seeing it as an action that does not have an apparent or immediate result, response or product. The transition from viewing productivity as the end result of changing one’s beliefs through mindful reflections is a fairly new concept, and as such, can be met with resistance or engagement. The research has validated the methodology of the proposed study, but it is also evidence that the study had limitations.

**Summary**

The significance of creative novelty and mindfulness in leadership practices is supported by evidence-based studies. Implicit in the theoretical orientation of mindfulness is deliberate awareness and paying attention in the moment without judgment, whereas the risk of being mindless is continuing to follow familiar routines (Langer, Falk & Capodilupo, 2004). By recognizing that creativity is a desirable skill in the 21st century and that it is indeed the life of an organization (Pink, 2005), leaders can teach creative thinking skills (DeBono, 1994), be more progressive and promote greater diversification of products (Rhodes, 1961; Puccio, Mance & Murdock, 2011). A review of previous research suggests that the limitations of each study need to be considered when analyzing the data so that the proposed study may fill the gaps and contribute to the literature. Despite the extensive research work on mindfulness by Langer, Kabat-Zinn, Seigel, Wong, Carroll and others, it is unclear what interventions can be used to promote creative novelty in leaders in order to empower followers. There are gaps in the research that do not integrate the variables of this study, which sought to uncover new modalities, and well as expand on existing ones. Nevertheless, the study did show that the synergy of mindfulness reflective practice, creative novelty and leadership proved a valuable intervention for leaders of organizations.

**CHAPTER 3. METHODOLOGY**

**Purpose of the Study**

This quantitative study’s purpose was to contribute to the literature on mindfulness, leadership and creative novelty by investigating creative novelty among leaders in relation to mindfulness reflective practice. Distinctively, the research study was designed to answer the following question: Is there a difference in creative novelty among leaders after implementing an intervention of mindfulness reflective practice as measured by Langer’s Mindfulness Scale (Langer, 1997).

Creativity in relation to leadership is an understudied issue, especially with regard to how leaders impact followers’ creativity (Castro, Gomes & Sousa, 2012). To date, there has been minimal research conducted to examine the intervention of mindfulness reflective practice and creative novelty among leaders. Leaders who habitually act mindlessly develop patterns that reduce creativity (Langer, 2005). The hypothesis is that mindfulness reflective practices would make a difference in creative novelty among leaders. The study gathered valuable information that contributed to the literature on developing creativity among leaders using the intervention of mindful reflective practices.

**Research Design**

The chosen research method for this study was quantitative. McColl, Jacoby, Thomas, Soutter, et al. (2001) defined quantitative survey research as a scientific procedure for collecting information and making a quantitative inference about the variables or population. Surveys are ideal for research that focuses on the relationship between the variables in single groups (Robson, 2002). Therefore, a quasi-experimental research design was appropriate to use, with a pre- and post-test application of the Langer Mindfulness Scale (1997). (Appendix A). The quantitatve method was effective for the study because it allowed numerical values to the variables of interest to calculate that a statistical association was determined (Cramer & Howitt, 2004; Leedy & Ormrod, 2010). The research design measured the difference between creative novelty among leaders before and after a four week mindfulness reflective practice. Non-experimental survey research determines if there is a difference between the variables and whether or not the difference was statistically significant (Creswell, 2009). Using a survey in research provides a “numeric description of trends, attitudes or opinions of a population (Creswell, 2009, p. 145). Surveys can be administered face-to-face (Alreck & Settle, 2003); this study administered the survey in person before and after the four week intervention.

The independent variable is mindfulness reflective intervention. The dependent variable is creative novelty in leadership as measured by the Langer’s Mindfulness Scale (Langer 1997). Each variable was measurable and objectively analyzed the variables in terms of numeric significance (Leedy & Ormrod, 2010). The use of a quantitative method allowed an objective stance to be taken. Langer’s Mindfulness Scale (1997) has been tested for reliability. The research ensured that the research was ethically and professionally conducted.

The objectivity of the research may be limited by the fact that the researcher implemented the interventions; consequently, the researcher’s relationship with the participants could have affected the degree of honesty in completing the Langer’s Mindfulness Scale (1997). The limitation could have impacted both the research results and the duplication of future research; therefore, the limitation was addressed by implementing the same mindfulness reflective practice to all participants in each group regardless of the identification with respective roles, and requesting participants, to be honest when completing the pre-post survey.

**Target Population and Participant Selection**

**Population**

The population for this research was comprised of leaders from a cancer support clinic, and two child and family mental health services. The leaders were directors, managers and coordinators whose roles consisted of supporting, empowering and encouraging others to perform duties.

**Sampling**

Purposive sampling was used to identify participants that had relevant homogeneous characteristics consistent throughout the research (Creswell, 2002). Purposive sampling was used to recruit participants from leaders of the cancer support clinic and the two child and family mental health services. Leaders were recruited by email informing them of the study and inviting their participation. The cancer support center has five locations that provide support for cancer patients and serves approximately 3600 patients a year; its leaders represent a diversity of cultural backgrounds and academic training and have been leaders for more than six months in the organization. Two of the five locations were used as research sites. The total population was 25; 22 females, and three males.

The second organization, a residential mental health service company designed to provide treatment for emotionally and behaviorally challenged children in a safe, encouraging and structured environment. The total population of leaders in the organization consisted of five members: four males and one female. The sample that participated was four leaders.

The third sample group was from an organization that offers many direct services to clients with complex emotional, behavioral or psychological needs, as well as customized training and consultation services to clients throughout Southwestern Ontario. The organization’s mission is to provide high quality, competency-based support services to children, adolescents and adults who require special care. The population consisted of nine leaders: eight females and two males. The sample that participated was nine leaders. From the three agencies, the overall study sample was 23 participants.

**Sampling Procedures**

The cancer support clinic research team reviewed the proposed research, and once the research was approved, leaders from the organizations were emailed letters to volunteer in the study. Both directors of the family mental health services approved leaders to participate in the research. Letters were then emailed for volunteer participation to all the leaders of the three organizations. All participants had been informed that the research was voluntary and assured that declining to participate had no implication on employment.

**Sample Size**

Thirty-nine leaders from the three different organizations were invited to participate in the study. The sample included 10 leaders from the cancer support agency; five from one child and family mental health center, and eight leaders from the other child and family mental health center. It is important that out of the population of 39 a minimum of 28 participants make up the sample in order to have a 10% margin of error with a 95% confidence level (Raosoft, 2004, para.1). The margin of error is 5%. The demographics information collected identified (a) gender (b) culture/ethnicity, (c) educational levels, and (d) leadership title. Internal consistency was important so that the reliability of the sample size would be valued.

The following inclusion criteria was used to select the sample participants: (a) the participants were in a position of director, manager, coordinator or leader of the organization, (b) individuals who had been in the position for a minimal of six months, (c) individuals who were fluent in English, (d) who held a leadership position within the organization, (e) and were over the age of eighteen.

**Research Questions and Hypotheses**

The main research question guiding the study were:

Q1: Is there a difference in creative novelty among leaders after implementing the intervention of mindfulness reflective practice as measured by Langer’s Mindfulness Scale (Langer, 1997)?

The hypotheses guiding the study were:

H1: There is a statistically significant difference between the intervention of mindfulness reflective practice and creative novelty in leadership as measured by Langer’s Mindfulness Scale (Langer, 1997).

H0 There is not a significant difference between the intervention of mindfulness reflective practice and creative novelty in leadership as measured by Langer’s Mindfulness Scale (Langer, 1997).

**Instrumentation**

The instrument used to collect data on creativity is the Langer Mindfulness Scale (2004). The Langer Mindfulness Scale is a 14 item self-administered questionnaire measuring three constructs: novelty-seeking, novelty producing and engagement, which all contribute to creative novelty.

**Reliability**

Langer, Pirson and Delizonna (2010) concluded that the Langer Mindfulness Scale (2004) has good internal consistency, test-retest reliability, and good discriminate and convergent validity and stability. Pirson, Langer, Bodner and Zilcha (2012) administered the Langer Mindfulness Scale to nine sample groups with a total of 4,345 responses; the authors concluded that the scale was reliable as it replicated consistently in five different samples. DeVellis (2003) measured that the coefficient alphas reliability estimates of the entire scale ranged from .83 to .9 across samples two to seven and remained stable over subsequent time periods in sample six and sample seven. Overall, the scale was a valid means of measuring the data, and according to DeVellis (2003), the reliability was considered “very good.”

The sub constructs reliability scores range from .75 to .86 across the samples for Novelty Seeking factors, .71 to 9 through samples for Novelty Producing and from .65 to .8 across the samples for the Engagement Factor (Pirson, Langer, Bodner & Zilcha, 2002). The reliability measures for each of the sub factors is considered acceptable. The results of the studies also concluded that the scale is reliable and culturally stable.

**Validity**

Researchers established convergent validity by examining the relationship between Langer’s Mindfulness Scale and conceptually similar meditative mindfulness constructs and an expected positive correlation. The scale could be used to bridge mindfulness in fields that can help practitioners in clinical, medical, social and organizational occupations to enhance the work. The scale was utilizing cross-sectional, two-wave and multi-wave longitudinal data that included 4,335 observations from 3,913 participants in 9 separate studies ((Pirson, Langer, Bonder & Zilcha, 2002). The results of the rigorous process of psychometric analyses and experts’ conclusions finds that the LMS is psychometrically valid in three dimensions and strong internal consistency.

**Stability**

Langer’s Mindfulness Scale has good short and long term stability. Research assessed the temporal stability in the short term (time 1 to time 2. and 3. time 2 to time 3. 9.5 weeks, time 3 to time 4, 6.5 weeks) using sample 7 and in the long term (time 1 and to time 2, 1 year) using sample 6, and (time 1 to time 4, 19 weeks) using sample 7 (Pirson, Langer, Bonder & Zilcha, 2002). The results of correlation between time 1 and 2 resulted in significant short and long term correlations ranging from .665 to .821 (p<.001for the scale. Chronbach’s alpha was .891 and for the post questions, Chronbach’s alpha was .756, indicating, at least, adequate internal consistency in both administrations of this measure. The correlations between the subscales and a total score of the scale were also examined separately for the pre and post administrations. The subscales were positively and significantly correlated with each other, as well as with the total score for the pre-administration (see Table 1). Most of the subscales were positively and significantly correlated with each other and with the total score for the post administration. The internal consistency of the Mindfulness Scale was examined for the pre and post questions in this study. Therefore, the Langer’s Mindfulness Scale demonstrated evidence of stability in both the short and long-term.

**Data Collection**

Perspective participants who met the inclusion criteria were asked to sign a consent form, and asked if they had any questions about the study. The consent forms were emailed to leaders two weeks prior to participating in the first session. The consent form was also read to participants on the first day of the intervention to ensure that everyone understood the terms of participation. All participants signed the consent form prior to starting the intervention and the researcher was the witness to the signature. There was an opportunity for questions before the researched commenced.

Next, participants were asked to complete Langer Mindfulness Scale. Once the pre-test was completed, participants underwent in a four week mindfulness reflective practice intervention. The intervention lasted 60 minutes: 30 minutes of meditation, 10 minutes recording reflections of experiences and 20 minutes of sharing their experiences and reflections as a group. At the end of the four weeks, the participants completed the pro-test of the Langer Mindfulness Scale. The data was collected on paper from the participants and locked in a filing cabinet until the results could be entered into a computer for analysis. The pre-and post-test were analyzed using a t-test to compute scientific evidence of the difference between mindfulness reflective practice and creative novelty among leaders after the four week intervention.

**Variable and Constructs**

In this study, the Langer’s (1997) Langer Mindfulness Scale (LMS) measures the cognitive aspect of mindfulness, and the constructs include novelty seeking, novelty producing and engagement.  The independent variables are (a) novelty seeking, (b) novelty producing, and (c) engagement. The dependent variable is mindfulness. Thus, a pre- and post-test intervention study was conducted to determine the associations between these variables. This study examined whether novelty seeking, novelty producing, and engagement have an associative effect on mindfulness among leaders because each of these variables contributes to creative novelty. To determine the association between these variables Langer’s Mindfulness Scale was used.

**Data Analysis**

The data was analyzed using t-tests. Langer’s Mindfulness Scale is a questionnaire that uses a seven point Likert scale.  The Software Package for Statistics and Simulation (SPSS) was used to measure the associations. Dr. Langer provided a scoring guide for the scale. Data was collected before and after the four week intervention. The descriptive statistics focused on aspects of the data, which provided details about the samples and information about the populations from which the sample was drawn from in the research (Larson, 2006). Descriptive statistics provided descriptors of the sample characteristics including (a) education (c) title of leadership position and how many females and males participated in the study. The research question explored whether there was a difference between the intervention of mindfulness reflective practice and creative novelty among leadership as measured by Langer’s Mindfulness Scale (Langer, 1997). The Langer’s Mindfulness Scale (1997) pre and post survey had used t-tests to determine if there were a difference between groups regarding the concepts of mindfulness and creative novelty after four week intervention. The statistical analysis determined whether there were statistically significant relationships between independent variables and the dependent variable. One member was excluded from the study because participants did not complete the post-test.

**Ethical Considerations**

It is vital that the study population not be put at risk and are protected by documentation that establishes ethical practices. Privacy and confidentiality were respected (Bordens & Abbott, 2008). The research was approved by Capella University’s Institutional Review Board (IRB), by the Canadian Institutional Review Boards, and each participating center’s research teams. Respect of the participants was implemented (Belmont Report, 1979) throughout the research. Participates received a letter indicating the purpose of the study and informed that their participation was voluntarily and that they could withdraw at any time. Consent forms were completed before participation in the research. The research ensured the anonymity and confidentiality of all surveys by providing each participant a number as the identifying information. The participating institutions were also kept confidential. At the cancer support center, the researcher addressed the issue of power differentiation between the director and the managers; all managers agreed to continue to participate with the director as part of the group. The Belmont (1979) principle of beneficence was addressed, which ensured minimal risk and protection against risk to all participants. The justice (Belmont Report, 1978) principle was upheld to ensure subjects were all selected fairly, and that the risk and benefits of the research were equally distributed. All participants were informed of the results of the study and provided information on how they contributed to the data and literature. The research was implemented directly as stated in the methodology, and conducted ethically, with integrity, respect, and maintained justice.

**Expected Findings**

It was expected that the null hypothesis would be rejected and that there would be a significant difference between the intervention of mindfulness reflective practice and creative novelty in leadership as measured by Langer’s Mindfulness Scale (Langer, 1997). If dissemination of the mindfulness reflective intervention proved effective, then the post-test level of creative novelty as measured by the Langer’s Mindfulness Scale (1997) would have increased after four weeks of intervention. It was further speculated that with the increase of novelty seeking, novelty producing and engagement the post-test would show that creative novelty had significantly increased.

**CHAPTER 4. DATA COLLECTION AND ANALYSIS**

**Introduction**

This chapter will demonstrate a quantitative analysis of the data which was obtained from the self-reporting instrument, the Langer Mindfulness Scale (LMS; Langer, 1997). The research question was to examine a difference in creative novelty among leaders after implementing the intervention of mindfulness reflective practice as measured by Langer Mindfulness Scale (LMS; Langer, 1997). The structure of this chapter is as follows: first a description of the sample will be presented followed by the summary of results, detailed analysis of the results and lastly, a recapitulation of the findings is given in the conclusion.

A quasi-experimental research design was used with a pre and post-test of the Langer Mindfulness Scale (1997). The purpose of the research was to answer the following question: is there a difference in creative novelty among leaders after implementing the intervention of mindfulness reflective practice as measured by Langer Mindfulness Scale (Langer, 1997). The dependent variable is creative novelty and the independent variable is mindfulness reflective intervention. Founded in earlier research (Langer, 2009; Langer, 2005; Pink, 2005; Puccio, Mance & Mudock, 2011; Yukl & Mahsud, 2010; Kabat-Zinn, 2003; Siegel, 2010; Rhodes, 1961; Amabile, 1988), creativity, creative novelty, leadership, mindfulness and reflective practice were significant elements in concluding if there was difference in creative novelty among leaders after the intervention of mindfulness reflective practices.

The dependent variable used in this study was creative novelty, which was defined as the discovery or creation of something unknown at a particular point in time (Witt, 2009) and the development of new, effective, high quality ideas that are useful to an organization (Matthew, 2009). The post-test data of the dependent variables was analyzed using a t-test to measure the components of novelty seeking, novelty producing and engagement. The independent variable was mindfulness reflective intervention.

**Null and Alternative Hypothesis**

The research question was to examine a difference in creative novelty among leaders after implementing the intervention of mindfulness reflective practice as measured by Langer Mindfulness Scale (LMS; Langer, 1997). The null hypothesis (Ho) stated that there would be no difference in the mean LMS between the pre-test and post-test scores among leaders after the mindfulness reflective practice intervention. The alternative hypothesis (HA1) stated that the mean LMS post-test score from the group would be less than or equal to the mean LMS post-test score among leaders after the mindfulness reflective practice intervention. The three subcomponents of the LMS included novelty seeking, novelty producing, and engagement. It was expected that there would be significant differences from pre-test to post-test on each of these subcomponents.

**Treatment of Data**

A population size of 39 subjects is adequate in order to yield a moderate effect size with the power set .08 and apha equal 0.05 (Sidani and Branden, 1998). The sample size was 28 participants. It was important that out of the population of 39, a minimum of 28 participants made up the sample in order to have a 10% margin of error with a 95% confidence level (Raosoft, 2004, para.1). The margin of error was 5%. The demographics information collected identified (a) gender (b) culture/ethnicity, (c) educational levels, and (d) leadership title. Internal consistency was important so that the reliability of the sample size would be valued.

The data provided by the participants was gathered using the self-reporting instrument, the Langer’s Mindfulness Scale (1997). Participants rated each of the 14 items on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The raw data was coded and analyzed using the software program SPSS 23, and an alpha level of .05 was used for all statistical tests. The statistical tests consisted of the pre-test and post-tests. The pre-test and post-test means were computed.

**Participant Recruitment**

Prior to narrowing the sample population, several organizations were contacted and asked if they would be interested in the research study. The cancer support center and the two child and family agencies were interested in participating and met the criteria. The directors of these agencies were contacted and the research was discussed. The research plan was then given to the research teams for review and approval. Administrators of each agency provided email addresses for each leaders, who were subsequently contacted and informed about the research and given a consent form. Leaders who met the criteria were invited to participate in the mindfulness reflective practice. Out of the 39 emails, 24 leaders agreed to participate.

Figure 1. Flow Chart of Participant Recruitment

Assessed for eligibility.

Reviewed research with Directors and Research

team (n=39)

E-mailed Informed Consent (n=39)

Completed and returned Informed Consent and Langer Mindfulness Pre-test (n=24)

Completed and returned Langer Mindfulness Post-test (n=23)

**Description of the Sample**

In this study, a purposeful sampling strategy was used to recruit participants for the study. Initially, 39 leaders from three different organizations were invited to participate in the study. After six weeks recruiting for participants, a total of 24 agreed to participate in the study. Demographic information was collected which included (a) gender, (b) educational level, (c) culture, and (d) leadership title. Participants were notified of inclusion and exclusion criterion before participating in the mindfulness reflective practice intervention. The inclusion criteria were (a) the participant was in the position of director, manager, coordinator or supervisor, (b) individuals had been in the position of leadership for a minimum of six months, (c) individuals were fluent in English, and (d) were over the age of eighteen.

**Demographic Data**

Of the population of 39 leaders only 24 participants met the sample criteria. One participant did not attend the last session and did not complete the post survey; consequently, that former participant’s pre-test survey was removed from the analysis. The 23 remaining pre and post-tests were retained for analysis of the study. The sample included 20 females and three males, whose educational profile showed that 8 had completed college, 11 had completed a bachelor’s degree and 4 had completed a master’s program. The sample group’s leadership title identified 6 as coordinators, 13 managers and 4 directors. The cultural breakdown showed 21 participants were Caucasian and 2 Asian. Data was collected on 23 participants who completed the pre-and post-survey. The data from the 24th participant was removed after the participant was unable to attend the entire study period and did not complete the survey. The means were calculated from the remaining participants. Using the SPSS 23.0 software program demographic characteristics: gender, education leadership title and culture are in Table 1.

## Table 1. Distribution of Mean Gender, Education, Leadership Title and Culture

Variable Participants

(*n* = 23)

Gender

Female 20

Male 3

Education

College 8

Bachelor Degree 11

Master’s Degree 4

Ph.D. 0

Leadership Title

Coordinator 6

Manager 13

Director 4

Cultural Background

Caucasian 21

Asian 2

**Summary of the Results**

A summary of the results regarding the differences between pre-test and post-t scores in the LMS total score among leaders after completing the mindfulness reflective practice are presented here. The null hypothesis (Ho1) stated that there is no difference in the mean LMS pre-test (µ1) and post-test scores (µ 2), where HO1: µ 1= µ 2.  The alternative hypothesis (HA1) stated that the mean pre-test score (µ1) will be less than or equal to the post-test score (µ 2), where HA1: µ 1 ≤µ 2.  The one-tailed *t* test for non-independent (matched) sample was performed and gave the following results (Table 2). In order to determine if the null hypothesis should be accepted or rejected, a comparison between the pre-test and post-test mean scores were subjected to an independent sample t-test. A significant t-value was obtained, *t*=-3.45, *p*<.05, *df=*22. Since the t-test was significant, the null hypothesis was not supported and was rejected in favor of the alternative hypothesis.

**Details of the Analysis and the Results**

The first null hypothesis (HO1) stated that there is no difference in the mean LMS pre-post. The alternative hypothesis stated that there is a difference in LMS from pre to post testing. There were three components of the LMS scale: novelty seeking, novelty producing and engagement. A total score of the LMS scale was also derived. The means and standard deviations on all of these measures are included in Table 2. The pre administration of the LMS components was compared with the post administration of this scale using dependent t-test analyses. Total scores were compared, as well as the three subscales: novelty seeking, novelty producing and engagement. There was a significant difference between the pre and post total scores, *t*(22)= -2.64, *p*=.015, indicating that overall creative novelty significantly increased after participation in the mindfulness reflection intervention. There was also a significant difference between the pre and post novelty seeking subscale scores, *t*(22)= -3.45, *p*=.002, indicating that novelty seeking significantly increased after participation in the intervention. However, neither novelty producing nor engagement demonstrated significant differences [*t*(22)= -1.46, *ns*; *t*(22)= -0.31, *ns*].

Table 2. Langer Mindfulness Scale Pre and Post Means (SD) and T-Test statistics

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Pretest  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Post-test  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Descriptive Statistics | *N* | *M SD* | *M SD t* |
| Novelty Seeking | 23 | 27.09 4.80 | 29.48 3.20 -3.45\*\* |
| Novelty Producing  Engagement  Total Score | 23  23  23 | 24.78 5.70  21.74 3.71  73.70 12.37 | 26.08 4.24 -1.46  21.91 3.91 -0.31  77.48 8.68 -2.64\* |

*\*p<.05; \*\*p<.01*

**Conclusion**

The research aim was to acquire data on whether there were a statistically significant difference in creative novelty among leaders who participated in a four week mindfulness reflective practice intervention. After the data was collected and analyzed, the research made the following conclusions: (a) there was a significant difference between the pre and post total scores, indicating that overall creative novelty significantly increased after participation in the mindfulness reflection intervention, (b) there was also a significant difference between the pre and post novelty seeking indicating that novelty seeking significantly increased after participation in the intervention, and (c) neither novelty producing nor engagement demonstrated significant differences. Chapter 5 will include more details on the findings of the study and the implications, limitations and recommendations for further future research.

**CHAPTER 5. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS**

“Effective leaders embody the spirit of creativity” (Puccio, Mance & Murdock, 2011, pp. 14). IBM’s 2010 Global CEO study surveyed 1,500 Chief Executive Officers from 60 nations and 33 industries and found that the most critical factor for future success is creativity. Creative leaders are catalysts for change and generate a vision that engages, unites, motivates and empowers people (Kotter & Cohen, 2002). Creative leaders and employees throughout an organization affect the development of novel and useful products (Puccio, 2011; Amabile, 2004). As the most desirable 21st century skill, creativity is the life of an organization (Pink, 2005). Vital to success are leaders who promote creativity in the organizational environment (Amabile, Schatzel, Montela & Kramer, 2004). Moreover, creative thinking is not a talent, but a skill that can be learned (DeBono, 1994); and, since creativity does not occur automatically, leaders and organizations need a culture that encourages creativity. The foregoing demonstrates that there is a significant need to develop an effective intervention that promotes creativity among leaders. The dissertation research examined the effectiveness of mindfulness reflective intervention as an approach to promoting creativity among leaders of organizations.

Chapter one provided an introduction to the subjects of creativity and leadership, in chapter two the literature was reviewed, chapter three expounded on the research methodology, and in chapter four a quantitative analysis of the results of the study was presented. Chapter five summarizes this study and its purpose, and discusses the significance of the results as well as the limitations of the study, and addresses the study’s contribution to the literature on mindfulness reflective practice as an intervention that has significant influence on creativity among leaders. Finally, recommendations for future research in the areas of mindfulness reflective practice in conjunction with recent findings in neurocognitive and creativity are suggested.

**Summary of the Results**

How leaders can impact followers’ creativity, leadership and creativity is an understudied issue (Lalinauskas, 2014; Castro, Gomes & Sousa, 2012). It is well understood that leaders hold a critical influence on followers’ creativity and entire organizations (Den Hartog & Belschak, 2012; Eisenbeib & Boerner, 2013; Imran & Anis-ul-Hague, 2011; Tierney & Farmer, 2011; Shin & Zhou, 2003; Mumford, Scott, Gaddis & Strange, 2002); therefore, more empirical research needs to be conducted in order to better understand what interventions best enable leaders to enhance creativity in themselves and followers needs attention from researchers (Cerne, Jaklic & Skerlavaj, 2013; Walumbwa, Luthans, Avey & Oke, 2011; Tierney & Farmer, 2011; Yammarino, Dionne, Schriesheim & Dansereau, 2008; Mumford, Scott, Gaddis, & Strange, 2002; Tierney, Farmer & Graen, 1999).

The study showed notable differences in two areas after application of the mindfulness reflection intervention. These differences were between the pre and post total scores, *t* (22) = -2.64, *p* =.015, indicating that overall creative novelty significantly increased and between the pre and post novelty seeking subscale scores, *t* (22) = -3.45, *p*=.002; indicating that novelty seeking significantly increased. Therefore, this research has contributed positivity to the literature on how mindfulness reflective practice can be an effective intervention among leaders for the purpose of increasing creative novelty. However, there was no significant difference in novelty producing and engagement as shown by the pre and post test scores, [*t* (22) = -1.46, *ns*; *t* (22) = -0.31, *ns*].

**Creative Novelty**

Creative novelty is the result of evidence-based interventions whereby leaders elicit and gain acceptance of innovative, effective and high quality ideas (Matthew, 2009; Witt, 2009). Exceptional leaders work hard toward becoming creative thinkers (Harding, 2010; DeBuno, 1994, Puccio, Mance & Murdock, 2011). Risking patterns of mindless behavior is detrimental to creative novelty in both leaders and their followers. Creative leaders are at the forefront of social change because they motivate followers toward creativity and promote an organizational culture that values innovative thinking and free exchange of ideas (Pan, Wu, Zhou & Lou, 2015; Mance & Mudock, 2011; Kotter & Cohen, 2002; Wang & Cheng, 2010; Houghton & Diliello, 2010; Powell, 2008). New perspectives and innovative ideas occur when leaders encourage an open environment (Wang, Fang, Qureshi & Janssen, 2015; Jokisaari, 2013; Langer & Moldoveanu, 2000; Langer, Falk & Capodilupo, 2004; Shalley & Gilson, 2004), the significance of which is that such companies are built on and sustained by creative novelty and better able to adapt to ever-changing global conditions, which is key to any organization’s survival and success (Tuleja, 2014; Martinaityte & Sacramento, 2012; Amabile & Khaire, 2008; Mumford & Gustafson, 1998). Non-creative leaders and their organizations become stagnant and cannot compete (Puccio, 2012; Catling, 2007; Langer, Falk & Capodilupo, 2004). Stale routines affect predictable products of limited usefulness, while creative novelty has the potential of surpassing previous products, resulting in the development of product that are novel and appropriate (Chang, Hung & Lin, 2014; Im, Montaya & Workman, 2013; Kim, Im & Slater, 2013; Puccio, 2011; Amabile & Khaire, 2008; Amabile, 1996).

**Novelty Seeking**

A leader who seeks novelty perceives each situation as an opportunity to learn something new (Langer, Falk, Capodilupo, 2004). “It is possible to seek novelties for a whole lifetime, yet never discover something new” (Schweizer, 2006). Nevertheless, because novelty seeking is a positive trait leading to creativity and innovation (Djamshidian, O’Sullivan, Wittmann, Lees, et al. 2011) it is valuable to understand what it is and how it can be achieved and cultivated among leaders. According to Rhodes’s (1961) 4 P’s model of creativity, “person, process, product and press” are the four concepts that influence creativity. It is important in the process of creativity to seek novelty rather than be concerned with the end product itself. The creative process itself becomes the muse or sense of inspiration (Loori, 2005), and leaders have the freedom to express thoughts, emotions and values, which effects building the product. The novelty seeking allows opportunity to explore the “press” which is the relationship the leader has with the environment. “Press” implies that novelty seeking is an opportunity for a leader to explore their relationship with the environment. Press is interconnected to family values, tradition, culture, organization as the exchange between the person and their environment and recognizes that societal influences have significant impact on creativity (Rhodes, 1961).

When novelty seeking leaders notice more detail and how details are related to the environment, leaders increase awareness, which leads to more engagement, and the potential for learning something new is increased (Langer, Falk & Capodilupo, 2004). Mindfulness concept infers that the practice of reflection helps ensure both short and long term benefits as leaders become inherently reflective (Isaksen & Treffinger (2004). Mindfulness is an active state of awareness in the present attained by paying attention and suspending judgment as the experience unfolds (Langer, 2004, 2009, 1997; Kabat-Zinn, 2003; Seigel, 2010); mindfulness reflective practice has provided an intervention that promotes increased awareness without judgment. Mindful leaders are inherently reflective and therefore more efficient in developing the skill of novelty seeking, and, the ability to use reflection as a connection between knowledge and action (Vitello-Cicciu, Weatherford, Gemme & Glass, 2014; Tuleja, 2014; Grant, Langer, Falk & Capodilupo, 2004; Eriksen, 2009) with increased creativity in their approaches to idea generation and problem solving (Langer, Hefferman & Kiester, 1988). Mindfulness reflective practice enhances creativity (Glaveanu, 2011; Waldock, 2010), because increased awareness and the objectivity of a non-judgmental attitude make it possible to examine ideas from new perspectives and encourages novelty seeking (Kotter & Cohen, 2002; Harding, 2010; Pawlak, 2000; Bear, 2012). Organizations depend on mindful and reflective leaders to build opportunities for the growth of production through creative novelty seeking (Dennis, Minas & Bhagwatwar, 2013). Intentional work towards creativity (Amabile, 2008) results in an environment where mindful reflective interventions are valued for facilitating new ideas, new products and developing outstanding leaders (Langer, 2005).

**Novelty Producing and Engagement**

The results of this study did not indicate that mindfulness reflective practice made a difference in novelty producing or engagement. Novelty producing leaders generate new information in order to learn more about the current situation (Langer, Falk & Capodilupo, 2004). Leaders who score high in engagement have a higher probability to notice details about his or her specific relationship with the environment. (Langer, 2004). Novelty producing and engagement did not result in any difference in the study.

This study added to the literature by concluding that the intervention of mindfulness reflective practice did show a significant difference in novelty seeking, but that there was not a significant difference in either novelty producing or engagement. The results support the hypothesis that mindfulness reflective practice is an effective intervention for increasing creative novelty among leaders.

**Discussion of the Results**

What is the impact of mindfulness reflective practice intervention on a leader’s ability to produce creative novelty? The responses of twenty-three participants to 14 questions on the Langer Mindfulness Scale demonstrated that mindfulness reflective practice is an effective intervention that leaders can implement in order to increase the production of creative novelty. The data revealed the importance of studying creative novelty and how creativity influenced novelty seeking, novelty producing and engagement among leaders.

**Creativity and Mindfulness**

Creativity is central to the core functions of leaders: creating vision, and aligning and motivating people toward that vision (Kotter & Cohen, 2002). Mindful reflective practice heightened self-awareness among leaders, which then increased their ability to come up with creative new ideas. Self-awareness is perhaps the most critical leadership competency (Sethi, 2009, p.9). Thus, the self-awareness of leaders is essential to the relational process with their followers (Gatling, Castelli & Cole, 2013; Milford, 2012; Burke, 2002; Higgs, Rowland, 2010). Moreover, self-awareness differentiates high-performing transformational leadership from the average (Tekleab, Sims, Yun & Tesluk, 2008; Sosik & Megerian, 1999; Church, 1997). Therefore, the transformational quality of heightened self-awareness that results from mindfulness reflective practice intervention as demonstrated by this study is a key component in highly effective creative novelty production among leaders.

**Novelty Seeking**

People can engage in productive activities, yet only rarely create a really new product (Schweizer, 2006). Novelty seeking is the first step to discovering something new, but novelty seekers need to have a methodology or else they may never succeed in finding anything new (2006). Novelty seeking leads to (1) greater sensitivity to environment, (2) receptivity to new information, (3) new categories for structuring perception, and (4) multiple perspectives in problem solving (Langer & Moldoveanu, 2000).

Leaders who model novelty seeking behavior will likely be effective in having impact on members of the organization (Berry, 2012; Amason, Shrader & Tompson, 2006). Leaders can exercise their power through role modeling, which will encourage followers to emulate the leader’s behavior (Yukl, 1998). Therefore, leaders who demonstrate novelty seeking skills fulfill the role of motivating followers to seek novelty in turn. In attempting to answer the question of what interventions could induce leaders to seek creative novelty, it was found that mindfulness reflective practice made a difference in novelty seeking in individuals, and was a factor that could impact creativity throughout the organization. The study showed a difference in novelty seeking not only in individuals, but also in teams and organizations.

The study results support that a group of leaders reflecting together makes a difference in novelty seeking. Because creative ideas emerge from “collaborative webs, not from the minds of lone creators,” Sawyer (2007) proposes that creative teams and organizations not work in isolation. The study supports Rhodes’ (1961) four P’s model of creativity, which maintains that both person and process impact creative novelty. Creativity begins with an individual or team of individuals (Puccio, Mance, Switalski & Reali, 2012).

**Mindfulness Reflective Practice**

Mindfulness construct often refers to reflective practice as its main mechanism, or intervention (Kember, McKay, Sinclair & Wong 2008; Schön, 1991; Schön, 1988; Russel & Munby 1991) and in business education is exemplified by reflective leadership (Gosling & Mintzberg, 2003; Gray, 2007; Cunlife, 2004; Russ, 2002; Raelin, 2001; Hedberg, 2009; Looman, 2003; Mintzberg, 1975; Pavlovich, Collins, & Jones, 2009; Roglio & Light, 2009; Schmidt-Wilk, 2009). The opposite of mindfulness is mindlessness: “like being on auto-pilot,” according to Burgoon and Langer (1995). Mindlessness is a state common to a society that does not question assumptions and expects the status quo to remain unchanged (Thomas & Inkson, 2009), whereas mindfulness is a consequence of an active intention to examine the potentiality of conditions and situations; therefore, leaders need to adopt mindfulness over mindlessness. By monitoring their personal feelings, thoughts and actions through mindful reflective practice, leaders can extract more meaning from cultural situations, events and actions by expanding their perspective rather than adhering to rigid points of view or ways of confronting problems (Bird, Mendenhall, Stevens & Oddou, 2010).

Mindfulness reflective intervention provided leaders an opportunity to gather together to practice Rhodes’ (1961) second important element of creativity: “process”. The process is the means by which a group works through the thinking stage as it explores and applies creative ideas to predicaments and opportunities (Puccio, Mance, Switalski & Reali, 2012). It is during the process that the creativity among leaders transfers to their followers and then to the larger system, the organization. In this study, the process of bringing individuals together as a group in order to reflect on their experiences of the intervention and share them in open discussion contributed to the process of creativity and resulted in increased novelty seeking.

The results indicate that mindfulness reflective intervention supports leaders in seeking new approaches and perspectives, which however, do not necessarily generate new products or stimulate engagement. The significant implication of the results is that the next step is to research intervention designs that could promote novelty producing and engagement.

**Discussion of the Conclusions**

The research added to the literature by providing a mindfulness reflective intervention that makes a difference in creative novelty among leaders by developing novelty seeking, and supports Rhodes (1961) 4 P’s of creativity. The results indicate that the *person* is an important variable when developing creative novelty. The *process* of mindfulness reflective intervention had significant influence on novelty seeking on the participants. Therefore, the inference is that the results also support that organizations that provide opportunities for group mindfulness reflective practice as an intervention would also have significant influence on novelty seeking. The results also showed that *press,* which in this study was an environment that provided time for group mindfulness reflective practice, can make change in novelty seeking among the leaders of an organization. The results did not demonstrate any change neither in *product n*or novelty producing, nor in engagement.

**Limitations**

The fewer its limitations, the more valid a study; and, the more general the application of its results. A study’s methodology itself can be a limitation (Wheatley, 2010). The study using quantitative methodology was limited (1) when purposive sampling narrowed the criteria of participants, (2) because the sample size was small, and (3) a short duration of data collection. Research primarily focused on creative novelty and excluded the above organizational and situational factors: which, as the results indicated, did not validate the important practical needs of leaders; i.e. engagement and creative novelty producing. The conclusion suggested adjustments to address the limitations inherent in the methodology in order to provide a more generalized application. These are diversity in purposive sampling, a larger group of participants, and a longer duration, all of which would likely provide more comprehensive and possible different data. A well-designed study adds to the literature; but, it is hard to conceive any study having no limitations. Therefore, a thorough understanding of the limitations of this study will best inform the next study on creativity, leadership and mindfulness reflective practice.

**Methodology**

A quantitative methodological approach has several limitations (Wheatley, 2010). In this study, the method of data collection, the sample size and the short duration of the study were limitations. The study relied on accurate responses from the participants; however, there was no process to validate them. Self-reporting data can contain bias. Data collection was restricted to capturing only self-assessment by the participants, which does not offer a comprehensive or objective view of leadership with respect to creativity (Wheatly, 2010). The duration of the study is also a limitation because it does not determine how creative novelty impacted the organizations in the long term, nor whether a longer period of mindfulness reflective practice would have resulted in an even greater significance of creative novelty. Because the methodology did not have a control group, there is not data on a group of leaders whose creativity was measured without the implementation of a mindful reflective intervention.

**Participants**

While all participants were older than 18 years of age and met the criteria, there was not sufficient balance in gender and cultural diversity among the participants. Participants were from only two organizations, of only two types: a cancer support center, and a child and family mental health center. A broader selection of organizations would provide a more diverse cross-section of leaders and larger sample size. Muijs (2004) states that unbiased selection of the sample is important in quantitative research so that results can be generalized. The participants were also not chosen at random; and therefore, cannot be representative of the entire population of leadership. Future research needs to specifically investigate the impact other criteria, such as race, ethnicity, culture, age, gender, sexual orientation, education and socioeconomic status on mindfulness reflective practice among leaders.

**Sample Size**

The sample size of a study is important, especially when a data analysis method is used (Delice, 2010). Another limitation of the study was the small sample size N=23, which could have impacted the results. Small sample size can make it difficult to find significant relationships from the data because statistical tests normally require a larger sample size to ensure a representative distribution of the population (Bordens & Abbott, 2011; Research Guild, n.d.). A larger sample could have provided more and possibly different information. This study’s small sample size makes it difficult to generalize the findings for entire populations of leaders. In effect, the purposive sampling procedure limits application of the results to only those criteria covered during selection of participants.

**Summary**

When using quantitative methodology, purposive sampling of participants and the sample size are limitations to consider when analyzing the results the data. The methodology can make duplicating the research challenging. In addition, self-reporting information gathered from the questionnaires may be inaccurate or incomplete. Future research needs to consider using a greater sampling size of leaders from a variety of organizations with more cultural, educational and experiential diversity. The small sample size implies that the results of the study cannot be applied to all leadership populations; therefore, duplicating the research may be challenged by the specificity of criteria used to select participants. The limitations may be obviated in future research that approached study with larger numbers and broader criteria for its sample population.

**Recommendations for Future Research or Interventions**

Future research in the area of mindfulness reflective practice and interventions for creativity among leaders suggests the need for several different methodologies based on the questions raised by the results of the study. In relation to greater understanding of the mechanics of behavior, it has been discovered that novelty seeking behavior is related to individual differences in specific neurotransmitter activity in the brain. It has been argued that the novelty seeking personality is modulated by the transmission of the neurotransmitter dopamine (Cloninger, 1994). The link between an individual’s novelty-seeking personality and his/her creativity crucially depends on the degree to which an individual is a novelty seeker, and that is mainly related to the individual’s dopamine levels, and requires the matching forms of support by those who seek to manage their creative process (Schweizer, 2004). Neurocognitive characteristics of creative processes are highly under-researched, which suggests the imperative for more brain research lined to mindfulness reflective practice and creativity (Schweizer, Deijen, Heslenfeld, Nieuwenhuis & Talsma, 2006).

Because novelty seeking is the first step to novelty producing and engagement, more research needs to be conducted on what intervention leads from novelty seeking to novelty producing and on what motivates leaders to engage. If the duration of four weeks limited the study, then perhaps implementing mindfulness reflective practice over eight weeks, for example, would produce different results. Therefore, mindfulness reflective intervention duplicated in future studies should use a larger and more diverse sample size and be applied over a longer period of time.

**Conclusion**

The study contributed to the literature on how mindfulness reflective practice is an intervention that has significant difference on creativity among leaders. Four weeks of mindfulness reflective practice made a difference in novelty seeking among leaders. Creativity is central to the success of leaders and organizations. Mindfulness reflective practice allows leaders to lead mindfully instead of mindlessly. Not only the leader makes a difference in creative novelty but so does the process. Mindfulness reflective practice facilitates the process that makes a difference in creative novelty. Mindful and creative leaders are positive role models for followers and the organization. The limitations of the research suggest that future research be conducted using larger sampling size with increased diversity. Future research can build on current research in neuroscience to develop evidence-based interventions that promote creative novelty that leads to novelty producing and engagement. Creativity is the foundation for meeting the demands of the changing needs and challenges of individuals and organizations.

**References**

Albrecht, J. N., Albrecht, M. P. & Cohen, M. (2012). Mindfully teaching in the classroom: A literature review. *Australian Journal of Teacher Education*, 37, 1-14.

Alreck, P. L. & Settle, R.B. (1995). *The survey research handbook*. Salisbury, MD: Irwin.

Amabile, T. M. (1983). *The social psychology of creativity*. New York: Springer-Verlage.

Amabile, T. M. (1988). A model of creativity and innovation in organizations. In B. M.

Stew & L. L. Cummings (Eds.), *Research in organizational behavior* (pp. 123-167). Greenwich, CT: JAI.

Amabile, T. M. (1996). *Creativity in context*. Boulder: COL, Westview Press.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J. & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39, 1154-1184.

Amabile, T. M., Schatzel, E. A., Moneta, G. B. & Kramer, S. J. (2004). Leader behaviors and the work environment for creativity: Perceived leader support. *The Leadership Quarterly, 155-32.*

Amabile, T. M. & Khaire, M. (2008). Creativity and the role of the leader. *Harvard Business Review*, 86, 24-31.

Amason, C. A., Shrader, C. R. & Thompson, H. G. (2006). Newness and novelty: Relating top management team composition to new venture performance. *Journal of Business Venturing*, 21, 125-148.

[Andrews, B. H.](https://capella.summon.serialssolutions.com/search?s.dym=false&s.q=Author%3A%22Andrews%2C+Barbara+Henriksen%22) (2005). [Art, reflection, and creativity in the classroom: The Student-Driven Art Course](https://capella.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwxV1tS9xAEB7aE0v9YH3pxWtV9gc0Z3Yv2WTFKuVUhFYQK8UvEnY3GxSOnN7Lj_HfOrNJKocIfvPTstkQNpnJk5ndyfMAsFTEpPOmubBaR7yIMca2OlVSCeImcYu7udCu5zambRHRw3QxtrRCvkcMtpxKEo_uH0KSjKKt1VY_Y3HZY6Fw6JlaUTfiC8VPgTNJPsISFyKjIrDz6OI_dsuE1yybtF_AST-7Aeq6WPEFYHtQPf0Cj2-aw3vc6BqsNqEt-1X74jp8cNUGqUI3FSQbsPLvbjqvz5huwg02P9jB7eGlK0e-IKw62Ls99Id0VbDhpJW2oMPsrmIYq7JhG-3vM_Rw9rem5gyPJ4TadGVGKnxT9xWuTk-uhmdhI_YQOiV5mLlSudSqSGorNB8kqjQGsSQ2NnUYxWLYI-PUOmucEgaTIIMDiRkk5GFJqQZd6FTjygWwVOJ7iy1-SwO0UQCfrtWf4-zs97Durrfd_tT_19Z_mAVofv-EQ9lPt4AlTmnjuMVktIgFlzoqTaQGlussRp82PQjIK3LCgNlE21wQxw8po_dg1ztKfl9zheSYY1GpfS5SibliJnvQbe2eF6NRTgkloqbg314b-A6fPV2sLxHehs5sMnc7sNwY_wkLmARv). *Art Education*, 58, 35-40.

### [Antonakis, J. &](https://capella.summon.serialssolutions.com/search?s.dym=false&s.q=Author%3A%22ANTONAKIS%2C+JOHN%22) [Dietz, J.](https://capella.summon.serialssolutions.com/search?s.dym=false&s.q=Author%3A%22DIETZ%2C+JOERG%22) (2006). [Emotional intelligence: On definitions, neuroscience, and marshmallows](https://capella.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwzV1NSwMxEA1aULyIn_gJe_LU1WSTpluphSqrFrEF3V70sNQkSyt0Fang3T_uzH41FK3gyVNhaIfSvL7MbF7e4DVg2vBRPaMojYUWmvEYeJIqLqTSOp0QYZ_mfs6VDc0uwhx90P9f-iAbzZO6aEwNN7H37yVAMPEoyXRaKRKmfpamUHLeQrM7HOOJfF5xPxdy93LMB77NvsYJoZJKy4f07W7Y67ZvOqk6EB28y6q5E4QPWTC4u7IfPOCZeSGQOjYZWdZrwkV_OZtNuQUaz2JGlo2EyDdZlk0L-Zm_i9S5-I4BsRa6Ttsye2YrKwWGVmsDmSLMFGGmKM0UfRyhsfpYj9TkzCRu_34RunY_7ePP-8VGLrlHxYz467tvZVU0VmkSrpHVvKdw2hkS1smCSTbIcnGlYZM8NoetEhPNk2HLgYANDYydOr0E4xY-MFx1bIRUHVh4x8bHFgkvg_Di2s2HargKimuXK6jHVOxDpUe5gF6Ra3hl8klozehAmjqL60YLaQbegPsU_rpSej71dOzXFNTK26SSvCRmhzjoXBUbIHRJfaEUb3CJtufYIGgeP_FdworfJXrNrFOi39Zl7w-f2ScrU3gekMrk7d0ckqWcH74A8oZlSw). *Industrial and Organizational Psychology,* 33, 165-170.

Aumann, S. E. & Ehrhart, M. G. (2005). A unit-level perspective on organizational citizenship behavior. In D. L. Turnipseed (Ed), *Hand-book of organizational citizenship behavior* (pp. 143-156), New York, NY: Nova Science.

### Baer, M. (2012). Putting creativity to work: The implementation of creative ideas in

organizations. *Academy of Management Journal,* 55, 1102-1119.

### Barrett, H., Balloun, L. J. & Weinstein, A. (2005). The impact of creativity on performance in non-profits. *International Journal of Nonprofit and Voluntary Sector Marketing,* 10, 213-223.

Batalo, M. L. (2012). *Creativity and mindfulness* (Doctoral dissertation). Retrieved from ProQuest LLC, Ed.D. Dissertation. (ED547198)

### Belmont Report (1979). *The Belmont Report: Ethical principles and guidelines for the protection of human subject of research*. Retrieved December 2, 2015, from hhhs.gov/ohrp/humansubjects/guidance/Belmont.html

### Berry, W. J. (2012). *Do we have creative differences*? *How we construe creativity influences the salience of novelty and usefulness*. Retrieved from ProQuest Dissertations Publishing, 9781267779588, 1267779586

Bird, A., Mendenhall, M., Stevens, M.J., & Oddou, G. (2010). Defining the content domain of intercultural competence for global leaders. *Journal of Managerial Psychology,* 25, 810-828.

### Blake, R. & Mouton, J.S. (1985). Don't let the norms stifle creativity. *Personnel,* 62, 28-33.

Bodner, T. E., & Langer, E. J. (2001). *Individual differences in mindfulness: The mindfulness/mindlessness Scale*. Posterpresented at the 13th annual American Psychological SocietyConference, Toronto, Ontario, Canada.

Bordens, S. K. & Abbott, B. B. (2011). *Research Design and Methods: A Process*

*Approach 8th Ed.* New York, NY: The McGraw Hill Companies.

Boyd E & Fales A. (1983). Reflective learning: the key to learning from experience. *Journal of Humanistic Psychology*, 23, 99-117.

Brandt, N. (2008). *Wall Street Bosses: Tiger Woods meditates to focus, stay calm*. Bloomberg.com

## Brown, K. W. & Ryan, R. M. (2003). The benefits of being present: The role of mindfulness in psychological well-being. Journal of Personality and Social Psychology, 84, 822-848.

## Brown, K. W. & Cordon, S. (2009). Toward a phenomenology of mindfulness: subjective experience and emotional correlates in Didonna, F. (Ed.), *Clinical Handbook of Mindfulness,* Springer, New York, NY, 59-81.

## 

Burgoon, K. J. & Langer, J. E. (1995). Language, fallacies, and mindlessness- mindfulness. *Communication Yearbook*. 18, 105–132.

Burke, W. W. (2002). *Organization change: Theory and practice*. Thousand Oaks, CA:

Sage Publications.

Carroll, M. (2007). *The mindful leader: Ten principles for bringing out the best in ourselves and others.* Massachusetts: BO, Shambhala Publications.

Castro, F., Gomes, J. & DeSousa, C. F. (2012). *Creativity and Innovation Management*, 21,171-182.

## Carmody, J. & Baer, R.A. (2008). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioral Medicine,* 31*,* 23-33.

## Catling, T. (2007). Creative thinking a truly renewable energy resource. *British Journal of Administrative Management*, 60, 22-31.

### Cerne, M., Jaklic, M. & Skerlavaj, M. (2013). Authentic leadership, creativity, and

innovation: A multilevel perspective. *Leadership,* 9, 63-85.

### Chambers, R., Gullone, E., & Allen, N. B. (2009). Mindful emotion regulation: An integrative review. *Clinical Psychology Review, 29*, 560-572.

### Chandler, N. G., Keller, C. & Lyon, W. D. (2000). Unraveling the determinants and consequences of an innovation-supportive organizational culture. *Entrepreneurship: Theory and Practice*, 25, 55-59.

### Chang, J. J, Hung, K. P. & Lin, M. J. (2014). Knowledge creation and new product

performance: the role of creativity. *R & D Management*, 44, 107-123.

### 

### Chen, K. K. (2012). Organizing creativity: Enabling creative output, process, and organizing practices. *Sociology Compass,* 6, 624-643.

### Chermahini, S. A., & Hommel, B. (2010). The link between creativity and dopamine: Spontaneous eye blink rates predict and dissociate divergent and convergent thinking. *Cognition,* 115, 458-465.

Church, A. (1997). Managerial self-awareness in high-performing individuals in organizations. *Journal of Applied Psychology*, 82, 2, 281-292.

Choy, L. T. (1999).The strengths and weaknesses of research methodology: Comparison and complimentary between qualitative and quantitative approaches*, Journal of American Academy of Child and Adolescent Psychiatry,* 38,784-785.

### Cirella, S., Radaelli, G. & Shani, A. B. (2014). [Team creativity: A complex adaptive perspective](https://capella.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwxV3NTsMwDLbQEBMXYMDKv_oC7ZambVppDKHCNAm47cBtyh_aYXQMtpfhaXHSRlOFJnHjVEU9xHEb57Nj-wPwWRQbnjdOIsl5n6gYMbbkLE_zyPQm0c3bXFi7sED1aZ1FtGZaLaSJkPdImhDK0Hdgdx_LwHBGmbtVR6DRjHs0Moc2vRV5zb6gbiMUxXY9zXKzJ176xaaSMrOEyZHJs0Pgnf-y0Naqjg7h-09z_svKjuCgBrP-ffX3dWBHl8fQdrn0J9CdaP7uD2bDCpoamopBbzY8hZvR46QYB07UqZrPpzRh6JSh50NoF1rlotQe7L7h7sAnnlgeKsaD9mv-_JCNn4pq2HHD8MtWj4XLlYdKtqsK0pCdmWpxRROpCdGUx1QLwbiSFP1VIQUTkp2Dt0WMi61vLmEfEU1c5dNeQWv1udbXsFfr7QfmmcUR). *Management Research Review,* 37, 590.

Claxton, G. (2005). Mindfulness, learning and the brain. *Journal of Rational-Emotive & Cognitive Behavior Therapy, 23, 301-314.*

### Clayton, M. (2015, May, 26). *Ellen Langer: Cultivates mindfulness welcome to the management* Pocketblog] <https://managementpocketbooks.wordpress.com/2015/05/26/ellen-> langer-cultivated-mindfulness/#respond

Cloninger, C.R. (1994) Temperament and personality. *Current Opinion in Neurobiology*, 4, 266– 273.

Coholic, D. (2011). Exploring the feasibility and benefits of arts-based mindfulness-based practices with young people in need: Aiming to improve aspects of self-awareness and resilience. *Child and Youth Forum*, 40, 303-317.

Coman, A. & Bonciu, C. (2014). Leadership and creativity. *Manager Journal*, 1, 27-37.

Cornish, L. & Jenkins, K. A. (2012). Encouraging teacher development through embedding reflective practice in assessment. *Asia-Pacific Journal of Teacher Education*, 40, 159–170.

Costa, L. A. & Kallick, B. (2008). *Learning and leading with habits of mind: 16 essential characteristics for success.* Alexandria, Va: Association for Supervision and Curriculum Development.

Cramer, D. & Howitt, D. (2004). *The sage dictionary of statistics: A practical resource for students in the social sciences.* London, England: Sage.

Creswell, J. D., Way, M. B., Eisenberger, I. N. & Lieberman, D. M. (2007). Dispositional mindfulness and depressive symptomatology: Correlations with limbic and self-referential neural activity during rest. *Emotion, 10,* 12-24.

Creswell, J. W. (2009). *Research design.* Los Angeles: Sage Publications.

Creswell, J. W. (2009). *Research design.* Los Angeles: Sage Publications.

Csikszentmihalyi, M. (1996) *Creativity: flow and the psychology of discovery and invention*. New York: HarperCollins.

Cullen, T. L. (2006). How to get smarter, one breath at a time: Scientists find that mediation not reduces stress but also reshapes the brain. *Time*, 167, 16.

Cunliffe, A.L. (2004). On becoming a critically reflexive practitioner. *Journal of Management Education,* 28, 407-26.

Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S. F., Urbanowski, F., Harrington, A., Bonus, K. & Sheridan, J. F. (2003). Alterations in brain and immune function produced by mindfulness meditation. Psychosomatic Medicine, 65, 564–570

Davidson, R. J. & Lutz, A. (2008). Buddha’s brain: Neuroplasticity and meditation. *Signal Processing Magazine, 25,* 172-176.

DeBono, E. (1994). *DeBono’s thinking course* (Rev.Ed.). New York, New York.

### DeDreu, C. K. W., Baas, M & Nijstad, B. A. (2008). Hedonic tone and activation in

the mood-creativity link: Towards a dual pathway to creativity model. *Journal of*

*Personality and Social Psychology*, 94, 739-756.

### Delice, A. (2010). The sampling issues in quantitative research. *Educational, Sciences:*

Theory and Practice, 10, 2001-2018.

Delizonna, L, L., Williams, P. R. & Langer, J. E. (2009). The effect of mindfulness on heart rate control. *Journal of Adult Development*, 16, 61-65.

### Den Hartog, D. & Belschak, F. (2012). When does transformational leadership enhance

### Employee proactive behavior? The role of autonomy and role breadth self-efficacy. *Journal of Applied Psychology*, 97(1), 194-202.

### Dennis, A. R., Minas, R. K. & Bhagwatwar, A. (2013). Sparking creativity: improving electronic brainstorming with individual cognitive priming. *Journal of Management Information Systems,* 29, 195-201.

### DeVellis, F. R. (2003). *Scale development: Theory and application 2nd ed.* London: ENG, Sage Publications.

### Djamshidian, A., O’Sullivan, S. S., Wittmann, C. B., Lees, J. S. & Averbeck, B. B. (2011). Novelty seeking behavior in Parkinson’s disease. *Neuropsychological*, 49, 2483-2488.

### Edmonson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44,* 350-383.

Eisenbeiβ, S. A., & Boerner, S. (2013). A double-edged sword: Transformational

leadership and individual creativity. *British Journal of Management*, 24, 54-68.

Epstein, R. M. (1999). Mindful practice, *JAMA*, 28. 833-839.

Eriksen, M. (2009). Authentic leadership: Practical reflexivity, self-awareness, and self-authorship. *Journal of Management Education*. 33, 747-771.

Fadnes, L., Taube, A. & Tylleskär, T. (2008). How to identify information bias due to

self-reporting in epidemiological research*. The Internet Journal of Epidemiology,*

7, 2-10.

Fawcett, S.E., Brau, J.C., Rhoads, G.K., Whitlark, D. & Fawcett, A.D. (2008). Spirituality and organizational culture: Cultivating the ABCs of an inspiring workplace. *International Journal of Public Administration,* 31, 420–438.

Feather, R. (2009). Emotional intelligence in relation to nursing leadership: Does it really matter? *Journal of Nursing Management*, 17, 376-383.

Fjorback, L. O., Arendt, M., Ombol, E., Fink, P. & Walach, H. (2011). Mindfulness-based stress reduction and mindfulness-based cognitive therapy: a systematic review of randomized controlled trials. *Actual Psychiatrically Scandinavia*, 124, 102-119.

Friedrich, T. L., Mumford, M. D., Vessey, B., Beeler, C. & Eubanks, D. (2010). Leading for Innovation: Re-evaluating leader influences with regard to innovation type and

complexity. *International Studies of Management and Organization,* 40, 6-29.

Gatling, A. R., Castelli, P. A. & Cole. M. L. (2013). Authentic leadership: The role of self-awareness in promoting coaching effectiveness. *Journal of Management Research and Innovation,* 9, 337-347.

Gehani, R. R. (2011). Individual creativity and the influence of mindful leaders on enterprise. *Journal of Technology Management and Innovation,* 6, 82-91.

George, B. (2010). Mindful Leadership: Compassion, contemplation and meditation develop effective leaders. *The European Financial Review,* Oct, 16.

[Gillebaart, M.](javascript:__doLinkPostBack('','ss~~AR%20%22Gillebaart%2C%20Marleen%22%7C%7Csl~~rl','');), [Förster, J.,](javascript:__doLinkPostBack('','ss~~AR%20%22F%C3%B6rster%2C%20Jens%22%7C%7Csl~~rl','');) [Rotteveel, M.](javascript:__doLinkPostBack('','ss~~AR%20%22Rotteveel%2C%20Mark%22%7C%7Csl~~rl','');) & [Jehle, A. C. M.](javascript:__doLinkPostBack('','ss~~AR%20%22Jehle%2C%20Astrid%20C.%20M.%22%7C%7Csl~~rl','');) (2013). Unravelling effects of novelty on creativity. [*Creativity Research Journal*](javascript:__doLinkPostBack('','mdb~~ehh%7C%7Cjdb~~ehhjnh%7C%7Css~~JN%20%22Creativity%20Research%20Journal%22%7C%7Csl~~jh','');), 25, 280-285.

[Glăveanu, V. P.](https://capella.summon.serialssolutions.com/search?s.dym=false&s.q=Author%3A%22Gl%C4%83veanu%2C+Vlad+Petre%22) (2011). [Creating Creativity: Reflections from Fieldwork](https://capella.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwzV1LT9wwELYoqBWXCvpIl7ZSLtyabZx1XogiLVvQolZqpYLUm-W1HUBaUroslfrvO-NXwiI49xTFSSTHnz0vfzMmJC4zhue8CZpJIVKqGNjYUpR1UWdYm0Sv7OZOH6UNrYLwCD_o_4d-YgxBTKZd-NMh0PEHXTg3xKv2xmaVGPYaErP6FuqJqx-BjKK70hFD7IddVr-TCoHAMxd_tGhvDXF2LhQyfx2xVnVR0lE_qOCDij3BCHZewvLUSk7t24pklNvjNLw0tcUh-7PmnpBOXdIyaE1kwKQgcLFcRKeR_C78yfjb3UardyuweQqMXGJ19Ct1KZefdJuc_XgCrndlnPHxd6-N86owhZdD__3OtkmfXOlBUMvBGFnZHTdGx-kWee68hXhsMd4ma7p9QTYDLH9fkgB2vH9x0OG9__HiYA-beqBjW4zAxwH4V-Ts-Oh0Mk3ckRjJOWVZmcxkyTSegKBBiwlcUKVq0A2uaa5wh7WgVIALyRpRgHRNZZXKhlZCVSC8tShHr8l6-6vVEdloYI7DFUyOCP4rIs9-1l8_V9MvE3u77W-HNyb9b_h7GcGYmiWSFMPyDYlzXYuZphJ8dsUyWoi0maX1SFJRMVj6swGJcDg5gr9cCMkDcvDEjjC_tjVVeEbB9WB5PiAf_JCHZwYmjrQN7sabI178WjUDsnvvdZzP7huWc2re3XmwK2_JZrcA3pH15eJWvydPnXT5B4nGdf4). *Integrative Psychology and Behavioral Science,* 45, 100 – 115.

Goleman, D (2001). Emotional intelligence: Issues in paradigm building. In C. Cherniss & D. Goleman (Eds.). The emotionally intelligent workplace, (pp. 13-26), Jossey-Bass: San Francisco.

Goldman, S. K. (2010). Increasing leadership integrity through mind training and embodied learning. *Consulting Psychology Journal: Practice and Research*, 62, 21-38.

Goodman, B. & Miller, K. (2013). Research says: Creativity requires a mix of skills. *Journal of Educational leadership*, 70, 80-83.

Gosling, J. & Mintzberg, H. (2003). The five minds of manager. *Harvard Business Review*, 11, 54-63.

Gray, E. D. (2007). Facilitating management learning: Developing critical reflection through reflective tools. *Management Learning*, 38, 495-517.

Greenberg J, Reiner K. & Meiran, N. (2012). Mind the trap: Mindfulness practice reduces cognitive rigidity. PLoS one 7(5): e36206. doi:10.1371/journal.pone.0036206

Grivas, C. & Puccio, G. (2012). *The innovative team: Unleashing creative potential for*

*Breaking through results*. San Francisco: CA, Jossey-Based.

Gryskiewicz, S. (1999). Positive turbulence: Developing climates for creativity, innovation, and renewal. San Francisco, CA: Jossey-Bass

Guilford, J. P. (1950). Creativity. *American Psychologist*, 5, 444–454.

### Gursansky, D., Quinn, D. & Le Sueur. (2010). Authenticity in reflection: Building reflective skills for social work. *The International Journal of Social Work Education*, 29, 778-791.

### Hanh, Thich Nhat (1976).  The miracle of mindfulness.  Boston: Beacon Press.

### Harding, T. (2010). [Fostering creativity for leadership and leading change](http://capella.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwxV1Lb9QwEB5BKxAcgBYIgSLljJRt_IodqRShLatK9MABELfIj0RdqWy3u6nUv9J_y0weC9GqiBuXRLbjaGJ_GY_H8yA3YJfx2kihvQtVURvPndBF7YSUXjDLx6e5MOhz-6kdOGLLpsOlJw35oZYoJysm2IflVUopo-hodcifMVZ7jAyHfodWtH3yhfCe6yJX92GXcdxskLFf9mXDu5nOOue5nDKcse3T6NHy1TPxUYzTLZ7e8uPZU7j9JzL_x1g8gye99Jt87OC6B_eqxT4lju6NTPbh8ff5-rp7Yv0cTo7Oj2fkhULKx6PD8-MEK6arIeVFW4Njkpxt7LETuwhtETsknefEC_g2-_R1epr2aR9Szw1jaci5NaFWVjIZRAgaRYyggyHpRImAO8KKoiYZxZXnQjrPCi9tHYJVtrYuEy9hZ3G5qCLYrfEXxjsuqxHORQQPfxRnJ-b087Qr7g3Fybp1cZtcNREioR3JNJ_oV5BY3PJZZ0VugpPCZQ4lKltYhLfNK-F5DMkYIOV8_nPZXki6YihdxvBugEy57EKIlKyPzEpAQ5yRskwqZbiOISJQlQSpZmV9iSsKSdncxJD9ibOyaTU6dZd-ZftFZXPTxCD_2uVOGg4G4JXWkcbNN-sSP4bCQ2YZkrhpDhcXSCGpEQqu2es7W97Ao87sgkyeDmCnWV1Xb-FBD89fIdtD6Q). *Arts Education Policy Review*, 111, 51-53.

Harmon, R. J. & Morgan, G. A. (1999). Research problems and variables. *Journal of the American Academy of Child and Adolescent Psychiatry,* 38, 784-785.

Hedberg, R. P. (2008). Learning through reflective classroom practice: Applications to Educate the Reflective Manager. *Journal of Management Education*, 33, 10-36.

Higgs, M. & Rowland, D. (2010). Emperors with clothes on: The role of self-awareness in developing effective change leadership. *Journal of Change Management*, 10, 369-395.

Hill, L. & Betz. L. D. (2005). Revisiting the retrospective pretest. *American Journal of Evaluation*, 26, 5001-517.

Hooper, M. A. (2010). Quality feedback: Modeling reflective practices in a performance-based leadership development program. *National Teacher Education Journal*, 3, 111-119.

Houghton, D. J. & DiLiello, C. T. (2010). Leadership development: The key to unlicking individual creativity in organizations. *Leadership and Organization Development Journal*, 31, 230-245.

Hulsheger, U. R., Alberts, H. J., Feinholdt, A. & Lang, J. W. (2013). Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion and job satisfaction. *Journal Applied Psychology*, 98, 310-325.

Hunter, J. & McCormick, D. (2008). *Mindfulness in the workplace: an exploratory study*.  Paper presented at the meeting of the 2008 Academy of Management Annual Meeting. Anaheim, CA.

IBM 2010 Global CEO Study (2010). *Creativity selected as most crucial factor for*

*future success.* Retrieved from: https://www03.ibm.com/press/us/en/pressrelease/31670.wss

Im, S., Montoya, M. M. & Workman, J. P. (2013), Antecedents and consequences of creativity in product innovation teams. *Journal of Product Innovation Management*, 30: 170–185.

Imran, R. & Anis-ul-Haque, M. (2011). Mediating effect of organizational climate

between transformational leadership and innovative work behavior. *Pakistan Journal of Psychological Research*, 26, 183-199.

Isaksen, S. G., & Treffinger, D. J. (2004). Celebrating 50 years of reflective practice: Versions of creative problem solving. *Journal of Creative Behavior*, *38*, 75-101.

Ivcevic, Z., Brackett, M.A. & Mayer, J.D. (2007). Emotional intelligence and emotional creativity. *Journal of Personality,* 75, 199-236.

|  |  |
| --- | --- |
|  |  |

Jacobs, T. O. & Jaques, E. (1987). *Leadership in complex systems*. In J. Zeidner (Ed.), Human productivity enhancement: Organizations, personnel, and decision making, vol. 2. *New York: Praeger,* 7–65.

Janaka, & Balu, C. (2014). The concept of mindfulness in Buddhism. *Golden Research Thoughts*, 4, 1-4.

Jokisaari, M. (2013). The role of leader–member and network relations in newcomers’ role performance. *Journal of Vocational Behavior*, 82, 96–104.

Jordan, S., Messner, M. & Becker, A. (2009). *Management Learning, 4*, 465-473.

Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry,* 4, 33-47.

Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General hospital psychiatry*, *4*, 33-47.

Kabat-Zinn, J., Massion, A. O., Kristeller, J., Peterson, L. G., Fletcher, K. E., Pbert, L. Lenderking, W. R.. & Santorelli, S. F. (1992). Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders*. American Journal Psychiatry*, 149, 939-943.

Kabat-Zinn, (1994). *Wherever you go there you are: Mindfulness meditation in everyday life*. New York: NY, Hyperion.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice,* 10, 144-156.

Kaufman, J. C. (2009). *Creativity 101*. New York, NY: Springer Pub.

Kember, D., McKay, J., Sinclair, K. & Wong, K. F. (2008). A four-category scheme for coding and assessing the level of reflection in written work. *Assessment & Evaluation in Higher Education,* 33, 369–379.

Kim, N., Im, S. & Slater, S. F. (2013), Impact of knowledge type and strategic orientation on new product creativity and advantage in high-technology firms*. Journal of Product Innovation Management*, 30: 136–153.

Kotter, J.P. & Cohen, S. D. (2002). *The heart of change.* Boston, MA: Harvard Business School Press.

Knowles, M. S. (1990). *Making things happen by releasing the energy of others. In Adult Learner: A neglected species 4th ed*., 182-190. Houston: TX, Gulf Publishing.

Kyvik, O., Chang, Y. & Romero-Martinez, M. A. (2012). Value dimensions and creativity: An international comparative study*. International Journal of Manpower,* 33, 349-366.

Lalinauskas, M. (2014). Gamification in fostering creativity. *Social Technologies*

*Research Journal,* 4, 62-73.

Langer, E. J., Carson, S. & Shih, M. (in press). Sit still and pay attention? *Journal of Adult Development.*

Langer, E. J., Hefferman, D. & Kiester, M. (1988). *Reducing burnout in an institutional setting: An experimental investigation.* Unpublished manuscript, Harvard University, Cambridge, MA.

Langer, E. J. (1989). *Mindfulness*. Philadelphia: PA, Addison Wesley.

Langer, E. J. (1992). Matters of mind: Mindfulness/mindlessness in perspective. *Consciousness and Cognition*, 1, 289-305.

Langer, E. J. & Bodner, T. (1995). Mindfulness and attention, Unpublished manuscript, Harvard University, Cambridge, MA.

Langer, E. J. (1997). *The power of mindful learning.* Boston, MA: Perseus Books.

# Langer, E. J., Beck, P., Janoff-Bulman, R. & Timko, C. (1998). The relationship between cognitive deprivation and longevity in senile and non-senile elderly populations. *Academic Psychology Bulletin,* 6, 211-226.

Langer, E. J. & Moldoveanu, M. (2000). The construct of mindfulness. *Journal of Social*

Issues, 56, 1-9.

Langer, E. J., Falk, E. & Capodilupo, C. (2004). Mindful Creativity: Drawing to draw

Distinctions. *Creativity Research Journal,* 16*,*261-265.

Langer, E. J. (2005). *On becoming an artist: Reinventing yourself through mindful creativity*.

New York, NY: Ballantine Books.

Langer, E. J. (2009). *Counter clockwise: Mindful health and the power of possibility.* New York, NY: Ballantine Books

Langer, E. J. Pirson, M. & Delizonna, L. (2010). The mindlessness of social comparisons psychology of esthetics. *Creativity, and the Arts*, 42, 68.

Langer E. J., Cohen, M. & Djikic. M. (2012). Mindfulness as a psychological attractor: The effect on children. Journal of Applied Social Psychology, 42, 1114–1122.

Langer, E. J. (2015). Mindful reappraisal: Comment on Mindfulness broadens awareness and builds eudemonic meaning: A process model of mindful positive emotion regulation. *Psychological Inquiry,* 26, 365-367.

Langer, E. J. (2016). *The power of mindful learning*. Boston, MA: Da Capo Press.

Larson, M. G. (2006). *Statistical primer for cardiovascular research: Descriptive*

*statistics and graphical displays*. From the Department of Mathematics and Statistics, Boston University, Boston, and the National Heart, Lung, and Blood Institute’s Framingham Heart Study, Framingham, Mass.

# Lazar, W. S., Kerr. E. C., Wasserman, H. R., Gray. R. J., Greve, N. D., Treadway, T. M., McGarvey, M., Quinn, T. B., Dusek, A. J., Benson, H., Rauch, L., S., Moore, I. C. & Fischi, B. (2005). Meditation experience is associated with increase cortical thickness. *Neuroreport,* 16, 1893-1897.

# Lee, J., Semple, R. J., Rosa, D. & Miller, L. (2008). Mindfulness-based cognitive therapy for children: Results of a pilot study. *Journal of Cognitive Psychotherapy, 22,* 15-28.

# Leedy, P. D. & Ormrod, J. E. (2001). *Practical research planning and design (7th ed).*

Newark, NJ: Prentice-Hall.

Leroy, H., Anseel, F. Dimitrova, G. N. & Sels, L. (2013). Mindfulness, authentic functioning, and work engagement: A growth modeling approach. *Journal of Vocational Behavior*, 82, 238-247.

Lieberman, M. & Langer, E. J. (1997). *Mindfulness in the process of learning.* In E. J. Langer (Ed). The power of mindful learning. Reading, MA: Addison Wesley.

Litchfield, R. C. (2009). Brainstorming rules as assigned goals: Does brainstorming really improve idea quantity? *Motivation and Emotion*, 33, 25–31.

Litchfield R. C., Fan J. & Brown V. R. (2011). Directing idea generation using brainstorming with specific novelty goals. *Motivation and Emotion, 35, 135-143.*

Loo, R. & Thorpe, K. (2002). Using reflective learning journals to improve individual and team performance. *Team Performance Management,* 8, 134–139

Looman, D. M. (2005). Reflective leadership: Strategic planning from the heart and soul.

*Consulting Psychology Journal: Practice and Research,* 55, 215-221.

# Loori, D. J. (2005). *The zen of creativity: Cultivating your artistic life.* New York: NY, Ballantine Books.

# Lynoe, N. & Hoeyer, K. (2005). Quantitative aspects of informed consent: considering the dose response curve when estimating quantity of information. *Journal of Medical Ethics,* 31, 736-738.

Mahathera, N. (1990). *Sang Buddha dan ajaran-ajarannya*. Jakarta : Yayasan Dhammadipa Arama.

Martinaityte, I. & Sacramento, A. C. (2013). When creativity enhances sales effectiveness: The moderating role of leader-member exchange. *Journal* *of Organizational Behavior,* 34, 974-994.

Mathisen, G. E., Einarsen, S. & Mykletun, R. (2012). Creative leaders promote creative

organizations*. International Journal of Manpower*, 33, 367-382.

Matsuo, M. (2012). Leadership of learning and reflective practice: An exploratory study of nursing manager. *Management Learning*, 42, 609-623.

Matthew, T. C. (2009). Leader creativity as a predictor of leading change in organizations. *Journal of Applied Social Psychology*. 39, 1-41.

McCabe, B. J. & Heerwig, J. A. (2009). Education and social desirability bias: The case of a black presidential candidate*. Social Science Quarterly*, 90, 674-686.

McColl, E., Jacoby, A., Thomas, L., Soutter, J., Bamford, C., Steen, N. & Bond, J. (2001). Design and use of questionnaires: a review of best practice applicable to surveys of health service staff and patients. *Health Technology Assessment,* 5, 1-256.

## McCown, D., Reibel, K. D. & Micozzi, S. M. (2010). *Teaching mindfulness: A practical guide for clinicians and educators*. New York: NY, Springer.

## 

## Mellor, N. (2015). Mindful leadership. *The Safety and Health Practitioner*, 8, 8-19.

Mezirow, J. & Associates. (2000). Learning to think like an adult: Core concepts of transformation theory. In J. Mezirow (Ed.), *Learning as transformation: Critical perspectives on a theory in progress,* (pp. 3-34*)*. San Francisco: Jossey-Bass.

## Milford, H. B. (2012). Self-awareness: The key to successful leadership. *Infantry Magazine*, 101, 19-23.

Miller, J. J., Fletcher, K., & Kabat-Zinn, J. (1995). Three-year follow-up and clinical

implications of a mindfulness meditation-based stress reduction intervention in

## the treatment of anxiety disorders. *General Hospital Psychiatry, 17*, 192-200.

## Miller, D. L. (2015). Cultivating Creativity. [***English Journal***](http://search.proquest.com.library.capella.edu/pubidlinkhandler/sng/pubtitle/English+Journal/$N/42045/DocView/1693822480/fulltext/48E7C7EAA5474E38PQ/1?accountid=27965)***, High school edition***[*,*](http://search.proquest.com.library.capella.edu/indexingvolumeissuelinkhandler/42045/English+Journal/02015Y07Y01$23Jul+2015$3b++Vol.+104+$286$29/104/6?accountid=27965) 25-30.

## Mintzberg, H. (1975). The manager’s job: Folklore and fact. *Harvard Business Review,*

## 49-61.

## Morgan, M. M. (2009). Reflective practice and self-awareness. *Perspectives in Public Health*, 129, 161-162.

### Morledge, J. T., Allexandre, D., Fox, E., Fu, Z. A., Higashi, K. M., Druzikas, T. D., Sissi, V. & Reese, R. P. (2013). Feasibility of an online mindfulness program for stress management: A randomized, controlled trial. *Annals of Behavioral Medicine*, 46, 137-148.

### Muijs, D. (2004). *Doing quantitative research in education with SPSS*. London: ENG, Sage.

Mumford, M. D. & Gustafson, S. B. (1988). Creativity syndrome: Integration, application and innovation. *Psychological bulletin*, 103, 27-43.

### Mumford, M.D. (2002). Managing creative people: Strategies and tactics for innovation. *Human Resources Management Review,* 10*,* 313-351.

### Mumford, M. D., Scott, G.M.; Gaddis, B. & Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. *The Leadership Quarterly,* 13, 705-750.

Mumford, M. D. (2006). *Pathways to outstanding leadership: A comparative analysis of charismatic, ideological, and pragmatic leaders*. Mahwah: NJ, Lawrence Erlbaum Associates.

Mumford, M. D., Campion, M. A. & Morgeson, F. P. (2007). The leadership skills strataplex: Leadership skill requirements across organizational levels. *Leadership Quarterly,* 18, 154- 166.

### Namwoon, K., Im, S. & Slater, F. S. (2013). Impact of knowledge type and strategic

orientation on new product creativity and advantage in high-technology firms.

*Journal of Product, Innovation Management,* 30, 136-153.

Napoli, M. & Bonifas, R. (2011). From theory toward empathic self-care: Creating a

mindful classroom for social work students. *Social Work Education*, 30, 635-649.

Nyanaponika, T. (1972). *The power of mindfulness.* San Francisco: Unity Press.

Ocasio, W. (2011). Attention to attention. *Organization Science*, 22, 1286-1296.

### Oldham, G. R. & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal, 39*, 607-634.Top of FormBottom of Form

Oliver, P. (2006). Purposive sampling. In V. Jupp (Ed.), *The sage dictionary of social research methods.* (pp. 245-246). London, England: SAGE Publications, Ltd.

Pan, J., Wu, Q., Zhou, W. & Lou, Y. (2015). When is the leader’s creativity related to the Followers’ creativity? Across-level examination in China. *Innovation: Management, Policy & Practice,* 17, 364-382.

Patton, M. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Pavlovich, K., Collins, E. & Jones, G. (2009). Developing students’s skills in reflective

Practice. *Journal of Management Education,* 33, 37-58.

### Pawlak, A.M. (2000). [Fostering creativity in the new millennium](http://capella.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwxV3dS8MwED9EUfRB3dQ5P6DPQreuaZsGpiLTMVDfFHwL-WhxsE3dxx_jf-td2qpDBN98ahMCpcnl7neX_O6IBqyDME8jxo22mchTE2rGRa5ZFBnWUeHyaS5U8dxyaSuN6NS0fTEUIW-HHZaSMQ0uX998KhlFR6tV_YzlsMfSxaGv1IqqLL5gz0MuEpf0NBW0Je6D3qfq5iwqUoOK2E8YlZxcpjh9U9VO_fZ34P1PX_-PX9yF7RLUeleFFNZgJZvUYaO6U1-HrW9ZD_cg7T5f9IlbQs1u-_nCw44CvFIhC9cznHiITD3E_B7VRaIrOIvxPjz2bx56A78s4OAPiezsd3KF1k5xlvE8tpQSXSkdBqkxcW7QD7Xo7GhUIDE3iBwtYk3FgxgxRqyZ7VjBDmB18jLJGrCW42bEJxrIBk5_AzaexN11OrjtFc1a1WzNHFmt9TZv4KK6yfOTFj8ET6HzprRiSWp1xHSgERspoVBQVZIxEzbhrFxrORur0Qi3w0xSHOABraQcTodyOh_LiMkEvaYmiJ-DqzHEfpJB4X6x8iVIJKoCh8CbsF8JgLSjkaSMgAiT-dEv_cew6fj_jgB5Aqvz6SI7hfVSBj4A0Z0H8w). *Research-Technology Management*, 43, 32 – 35.

Piccolo, F. R. & Colquitt, A. J. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Journal of Academy of Management*. 49, 327-340.

Pink, H. D. (2005). *A whole new mind*. New York: NY. Riverhead Books.

Pirson, M., Langer, E. J., Bodner, T., & Zilcha, S. (2012). *The development and validation of the Langer Mindfulness Scale - Enabling a socio-cognitive perspective of mindfulness in organizational context*. (Ford-ham University Schools of Business Research Paper). New York, NY:Fordham University Graduate School of Business Administration.

Plucker, A. J., Beghetto, A. R. & Dow, T. G. (2004). Why isn’t creativity more important to educational psychologists? Potentials, pitfalls and future directions in creativity research. *Educational Psychologist,* 39, 83-96.

Polit, F. D. & Beck, T. C. (2010). Generalization in quantitative and qualitative research:

Myths and strategies. [*International Journal of Nursing Studies*](http://www.sciencedirect.com.library.capella.edu/science/journal/00207489)*,* 47, 1451–1458.

Powell, S. (2008). The management and consumption of organizational creativity. *Journal of Consumer Marketing, 25*, 158-166.

Pryor, M. G., Singleton, L, Taneja, S. & Toombs, L. The 4R’s model for nurturing creative talent.  *International Journal of Business and Public Administration,* 7, 27-39.

[Puccio, G.](javascript:__doLinkPostBack('','ss~~AR%20%22Puccio%2C%20Gerard%22%7C%7Csl~~rl','');) (1999). [*Creativity & Innovation Management*](javascript:__doLinkPostBack('','mdb~~bah%7C%7Cjdb~~bahjnh%7C%7Css~~JN%20%22Creativity%20%26%20Innovation%20Management%22%7C%7Csl~~jh','');), 8(3), 171.

Puccio, G. J., Murdock, M. C. & Mance, M. (2005). Current developments in creative problem solving for organization. *The Korean Journal of Thinking and Problem Solving*, 15, 43-76.

Puccio, J. G., Mance, M. & Murdock, M. (2011). *Creative leadership: Skills that drive change*. California, CA: Thousand Oaks.

Puccio, J. G., Mance, M., Switalski, M. & Reali, P. (2012). *Creativity rising: Creative thinking and creative problem solving in the 21st century.* New York, New York.

Raelin, J. A. (2001). Public reflection as the basis of learning. *Management Learning*, 32, 11-30.

Raney, A. F. (2014). Agility in adversity: Integrating mindfulness and principles of adaptive leadership in the administration of a community mental health center. Clinical Social Work Journal, 42, 312-32

Raosoft. (2004). Sample size calculator. Retrieved from <http://www.raosoft.com>

Raphael, K. (1987). Recall bias: a proposal for assessment and control. *International* *Journal of Epidemiology*, 16, 67-70.

Ray, L., Baker, L. & Plowman, A. (2011). Organizational mindfulness in business schools. Academy of Management Learning and Education Journal, 10, 188–203.

Rhodes, M. (1961). Analysis of creativity. *Phi Delta Kappan*, 42, 307-309.

Robson, C. (2002). *Real world research.* Malden, Massachusetts: Blackwell.

Roche, M., Haar, J. M. & Luthans, F. (2014). The role of mindfulness and psychological

capital on the well-being of leaders. *Journal of Occupational Health Psychology,*

Advance online publication. http://dx.doi.org/10.1037/a0037183

Roglio, K. D. & Light. (2009). “Executive MBA programs: The development of the reflective executive. *Academy of Management Learning* *and Education,* 8, 156-173.

### Rosenzweig, D. (2013). The sister of mindfulness. *Journal of Clinical Psychology*, 69,

### 793-804.

Runco, M. A. (2004). Creativity. *Annual Review of Psychology,* 55, 657–687.

Runco, M. A. (2007). *Creativity: theories and themes: research, development, and practice*. San Diego, CA, Academic Press.

Russ, V. (2002). Organizing reflection. *Management Learning*, 33, 63-78.

Russell, T. & Munby, H. (1991). Reframing. The role of experience in developing teachers professional knowledge’ in D. A. Schön (ed.) *The Reflective Turn. Case studies in and on educational practice*, New York: Teachers Press, Columbia University.

Ryan, R. M. & Brown, K. W. (2003). Why we don’t need self-esteem: On fundamental needs, contingent love, and mindfulness. *Psychological Inquiry*, 14, 71-76.

Salvik, C. (2014). An exploration of the impact of course specific mindfulness based practices in the university classroom. *Relational Child and Youth Care Practice*, 27, 6-17.

Sanchez-Ruiz, M.J., Hernandez-Torrano, D., Perez-Gonzalez, J.C., Batey, M. & Petrides, K.V. (2011, December). The relationship between trait emotional intelligence and creativity across subject domains. *Motivation and Emotion*, 35, 461-473.

Sawyer, K. (2007). *Group Genius: The creative power of collaboration*, Basic Books. ISBN 0465071929.

Schmertz, S. K., Anderson, P. L. & Robins, D. L. (2009). The relation between self-report mindfulness and performance on tasks of sustained attention. *Journal of Psychopathology and Behavioral Assessment,* 31, 60-66.

Schmidt-Wilk, J. (2009). Reflection: A prerequisite for developing the ‘CEO’ of the

brain. *Journal of Management Education,* 33, 3-7.

Schoeberlein, D. & Sheth, S. (2009). *Mindful teaching and learning: Developing a pedagogy of well-being*. Somerville: MA, Wisdom Publications.

Schön, D. A. (1983).*The reflective practitioner: How professionals think in action*. New York: Basic Books.

Schön, D. A. (1991). *The reflective turn: Case Studies In and On Educational Practice*, New York: Teachers Press, Columbia University.

Schweizer, T.S. (2004). *An individual psychology of novelty-seeking, creativity and*

*innovation.* ERIM Ph.D. Series, Nr. 48.

Schweizer, T. S., Deijen, J. B., Heslenfeld, D., Nieuwenhuis, S. & Talsma, D. (2006). *Functional magnetic resonance imaging of brain activity during rigid creative thought processes in obsessive-compulsive patients*. Paper presented at the Cognitive Neuroscience Society Conference, San Francisco, CA, USA.

Schweizer, T. S. (2006). The psychology of novelty-seeking, creativity and innovation:

Neurocognitive aspects within a work-psychological perspective. *Creativity and*

*Innovation Management,* 15, 165-172. doi:10.1111/j\_1467-8691.2006.00383.x

Scott, S.G. & Bruce, R.A. (1994) Determinants of innovative behaviour: a part model of individual innovation in the workplace. *Academy of Management Journal*, 37, 580–607.

### Sethi, D. (2009). Mindful leadership: Leader to leader. Winter, 2009.

### Shalley, C. E., Gilson, L. L. & Blum, T. C. (2000). Matching creativity requirements and the work environment: Effects on satisfaction and intentions to leave. *Academy of Management Journal,* 43, 215-223.

### Shalley, C. E. & Gilson, L. L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. The Leadership Quarterly, 15, 33-53.

### Shalley, C. E., Zhou, J. & Oldham. (2004). The effects of personal and contextual

characteristics on creativity: Where should we go from here? *Journal of Management,*

30, 933-958.

### 

### Shapiro, S.L., Walsh, R. & Britton, W.B. (2003). An analysis of recent meditation research and suggestions for future directions. *Journal for Meditation and Meditation Research*, *3*, 69-90.

Shin, S. & Zhou, J. 2003. Transformational leadership, conservation, and creativity: Evidence from Korea. *Academy of Management Journal*, 46, 703–714.

Sidani S. & Braden CJ. (1998). *Evaluating nursing interventions: a theory-driven approach*. Thousand Oaks, CA: Sage Publications.

Siegel, D. J. (2003). An interpersonal neurobiology of psychotherapy: The developing mind and the resolution of trauma. In Solomon, M. & Siegel, D. J. (Eds), *Healing Trauma*, 1-56. New York: WW Norton.

Siegel, D. J. (2007a). Mindfulness training and neural integration: Differentiation of distinct streams of awareness and the cultivation of well-being. *Social Cognitive and Affective Neuroscience*, 2, 259–263.

Siegel, D. J. (2007b).*The mindful brain: Reflection and attunement in the cultivation of well-being*. New York: Norton.

Siegel, J. D. (2009). Mindful Awareness, Mindsight, and Neural Integration. *The Humanistic Psychologist*, 37, 137-158.

### Siegel, R. D. (2010). *The mindfulness solution: Everyday practices for everyday problems*. New York: NY,

### Sisk, D.A. (2014, May). [Optimizing creativity](http://capella.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwzV1bSwJBFB5KKYKI7LJdDHypN8257A1MEDOFgh4yqCeZmZ3BJdxK7aVf35nd0VUJ6bGnZWBhhnNmzvnO3ZQBizrRAaO-FJEKdSCJoH6oBWVMUszJSjR3d23a0CoT1uQH_X_WP4IYGMXfaTnteDYfYhGFdmNtgOY8uWPZLzh3usSTtwxjjw07rdfTeggwy_PxFkJTvzsBjfcJNBJblIc2ThIvmKWZcMNZT0yrJ7Ht5L3UwnpFtcwT_vLosNnS7IhNBTCAiyvT4nwUxXJ6o5Lq89Mm2M8BWNHFVrvbeZ0pVZeRdAjp_MBLiXepCuzvoz0L4iutjPQltKGSAzP_2pLzEJVzFlQaw2bOhcb1sHmE-nedfrtXtXMoqsoNGSgq7WERuloyjKWpq8TaDwBICx4xXqeuZBpgnctF5CpJFCe-73EiQpCXHsOKHqNC8p4oBxU13Cv4gpp34OAO2n4JH26D3n07W5Zmy9okLbmrfU4dIEB6LatezT9BFQ4mKBecekEkGBV1AQiPhxyeG_cUleQUXRq6DD6yXiUDPGvnvkL2sz_-d4528itVRoXp-EtdoC37-H4AzHouGA). *Gifted Education International,* 30, 148-

### 159.

Skakon, J., Nielsen, K., Borg, V. & Guzman, J. (2010). Are leaders' well-being, behaviours and style associated with the affective well-being of their employees? A systematic review of three decades of research. *Work and Stress*, 24, 107-139.

Skjei, S. (2014). *Authentic leadership moments: A mindful inquiry*. (Doctoral dissertation). Retrieved from ProQuest LLC, Ed.D. Dissertation. 9781321521870

Soler, J., Cebolla, A., Feliu-Soler, A., Demarzo, M., Pascaul, J.C., Banos, R. & Garcia-Campayo, J. (2014). [Relationship between meditative practice and self-reported mindfulness: The MINDSENS Composite Index: e86622](http://capella.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwxV1bS8MwFA4yUHxRh1qvkD_QrkmvkTmRXdjQjcEUfBtpkrJh6Tbd_oy_1pM2VSYIvvlUQqFN851-OTlXhLCfEO0diiKRcEKVACUcfsdYuTRlUjG-7c1Fm8osUEJbMWJB03IhtIW8AY8guhQZY3fLla17RmnfatVAY9vusRU59F1bkZvuC_KWRizUaem6UrsO9iNjk1PnRaRhIHSWi1zp2qdhqPvq_uDpgnN7h-jjT2_-l-87QgdGpcX3pQzW0Y7Kj9HrV5TdbL7EJhoMa7fQuig1jscmPQvzXOKJylK7PAsoiZuz1nCey3STaR5uNmatGwzijIeDUWfSHU2wJjEdbKbwQBd7PEHPve5Tu2-bxg72Ek4wxBZpIEB0QJUMpOtKjylPpSJkXPuEKQMcEsIpVXB2k0rxRAgX1FTCRRDLhIvIO0W1HPCxUG39toEL7JsWAGOhvRf22In7D-1yWK-GznuRw-as1hZs08Wq2qETnSEc0ETGVIpQSuazJGCwjgHhUSAD34OJniOrQmwqs2wKHBj7DPZ1cvHrnUu0D3qVX1pqrspJXqNdg9sn3lnyig). *P*LOS, 9(1).

Sosik, J. & Megerian, L. E. (1999). Understanding leader emotional intelligence and performance: The role of self-other agreement on transformational leadership. *Group and Organization Management,* 24, 367-390.

Speca M, Carlson L. E, Goody E. & Angen M. (2000). A randomized, wait-list controlled clinical trial: the effect of a mindfulness meditation-based stress reduction program on mood and symptoms of stress in cancer outpatients. *Psychosom Medical,* 62, 613–622

Stein, M. I. (1974). *Stimulating creativity: Vol. 1. Individual procedures*. New York: NY,

Academic Press.

Sternberg, R. J. & Lubart, T. I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity.* New York: Free Press.

Sternberg, J. R. O’Hara, A. L. & Lubart, I. T. (1997). Creativity as investment. *California*

*Management Review*, 40, 8-21.

Sternberg, R. J. (2006). The nature of creativity. Creativity Research Journal, 18 (1), 87–98.

Stoeckel, P. R. & Davies, T. G. (2007). Reflective leadership by community college presidents. *Journal of Research and Practice*, 31, 895-912.

Sy, T., Cote S. & Saavedra, R. (2005). The contagious leader: Impact of the leader’s mood on the mood of group members, group affective climate, and group processes. *Journal of Applied Psychology*, 90, 295-305.

Takeuchi-Cullen, L. (2006). *Staff writer for time. Deutsch Bank and Hughes Aircraft have started offering meditation classes*. Retrieved from: [www.mindandlife.org](http://www.mindandlife.org)

Tekleab, A. G., Sims, H. P., Yun, S., Tesluk, P. E. & Cox, J. (2008). Are we on the same page? Effects of self-awareness of empowering and transformational leadership. *Journal of Leadership and Organizational Studies*, 14, 185-201.

Tierney, P., Farmer, S. M. & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personal Psychology*, 52, 591-620.

Tierney, P. & Farmer, S. (2011). Creative self-efficacy development and creative

performance over time. *Journal of Applied Psychology*, 96(2), 277-293.

Thomas, C. D. & Inkson, K. (2009). *Cultural intelligence: Living and working globally*, San Francisco: CA, Barrett-Koehler.

Tohidi, H. & Jabbari, M. M. (2012). The important of innovation and its crucial role in growth, survival, and success of organizations. *Procedia Technology*, 1, 535-538.

Tuleja, A. E. (2014). Developing cultural intelligence for global leadership through

mindfulness. *Journal of Teaching in International Business,* 25, 5-24.

University of California Research Guild. (2016, April 10). Retrieved from http://libguides.usc.edu/writingguide/limitations

Valentine, E. R. & Sweet, P. L. G. (1999). Meditation and attention: A comparison of the effects of concentrative and mindfulness meditation on sustained attention. *Mental Health, Religion & Culture,* 2,59-70.

Vitello-Cicciu, J. M., Weatherford, B., Gemme, D., Glass, B. & Seymour-Route, P. (2014). The effectiveness of a leadership development program on self-awareness in practice. *The Journal of Nursing Administration,* 44, 170-174.

Waldock, J. (2010). Facilitating student learning in clinical practice many nurses believe they are ill prepared an d poorly supported to supervise students Heavy 270 workload also prevent effective teaching and learning taking place. Retrieved February 2, 2011 at http:/www.thefreelibrary.com/facilitating+student+in+clinical+practice %3A+m.

Walkerden, G. (2009). Researching and developing practice traditions using reflective practice experiments. *Quality and Quantity*, 43, 249-263.

Walumbwa, F. O., Luthans, F, Avey, J. B. & Oke, A. (2011). Authentically leading

groups: The mediating role of collective psychological capital and trust. *Journal*

*of Organizational Behavior, 32, 4-24.*

Wang, Y. K. & Casimir, G. (2007). How attitudes of leaders may enhance organizational Creativity: Evidence from a Chinese study. *Creativity and Innovation Management,*

16, 229-238.

Wang, A. C. & Cheng, B. S. (2010). When does benevolent leadership lead to creativity? The moderating role of creative role identity and job autonomy*. Journal of Organizational Behavior*, 31, 106–121.

Wang, X. F., Fang, Y., Qureshi, I. & Janssen, O. (2015). Understanding employee

innovative behavior: Integrating the social network and leader-member exchange

perspectives. *Journal of Organizational Behavior,* 36, 403-420.

# Watson, S. & Vasilieva, E. (2007). Wilderness thinking. *Inside out Approach to Leadership Development.* 39, 242-245.

# Ward., M., Gruppen, L. & Reghr, G. (2002, January). Measuring self-assessment: current state of the art. [*Advances in Health Sciences Education*](http://link.springer.com.library.capella.edu/journal/10459)*,*7, 63-80.

Weick, K. & Sutcliffe, K. M. (2001). *Managing the unexpected.* San Francisco:

Jossey-Bass

Weiner, R.P. (2000). *Creativity and beyond: cultures, values, and change*.

Albany: State University of New York Press.

Weisberg, R. W. (1986). *Creativity: Genius and other myths.* New York: Freeman.

Wheatly, B. (2010). *Leadership styles of healthcare executive: Comparisons of*

*transformational, transactional, and passive-avoidant styles* (Doctoral

dissertation). Available from ProQuest Dissertations and Theses database.

(UMI No. 761148003)White, P. (2007, October 22). Executives find another way

to transcend the daily grind. Globe and Mail.

Whitehead, K. D., Weiss, A. S. & Tappen, M. R. (2009). *Essentials of nursing leadership and management.* Philadelphia: PA, F. A. Davis Company.

Witt, U. (2009). Propositions about Novelty. *Journal of Economic Behavior and Organization,* 70, 311-320.

Wong, Y. R. (2004). Knowing through discomfort: A mindfulness-based critical social work pedagogy. *Critical Social Work*, 5, Retrieved from: http://www.uwindsor.ca/criticalsocialwork/knowing-through-discomfort-a-mindfulness- based-critical-social-work-pedagogy.

Woodman, R. W, Sawyer, J. E. & Griffin, R.W. (1993). Toward a theory of organizational creativity. *The Academy of Management Review*, 18, 293-321.

Yadav, S. (2014). The Role of Emotional Intelligence in Organization Development*. IUP Journal of Knowledge Management,* 12, 49-59.

Yammarino F. J., Dionne S. D., Schriesheim C. A. & Dansereau, F. (2008) Authentic

leadership and positive organizational behavior: A meso, multi-level perspective.

*The Leadership Quarterly*, 19, 693-707.

Yukl, G. (1998). *Leadership in organizations* (4th Ed.). Upper Sabble River, NJ: Prentice-Hall.

Yukl, G. & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal: Practice and Research*, 62, 81-93.

Yukl, G. (2012). *Leadership in organizations 8th Ed.* Upper Saddle River: NJ, Pearson Education.

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
|  |  |