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Common strategies and practices among facilitators of innovative thinking in organizations

Matthew D. M. Watson

Pepperdine University

Graduate School of Education and Psychology

COMMON STRATEGIES AND PRACTICES AMONG FACILITATORS OF INNOVATIVE THINKING IN ORGANIZATIONS

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Matthew D.M. Watson, PMP

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Martine Jago, Ph.D. – Dissertation Chairperson

This dissertation was written by

Matthew Douglas McBride Watson

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DOCTOR OF PHILOSOPHY

Doctoral Committee:

Martine Jago, Ph.D., Chairperson

William Moseley, Ph.D.

Paul Sparks, Ph.D.

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DEDICATION

To My Daughters,

"The greatest danger for most of us is not that our aim is too high and we miss it, but that our aim is too low and we reach it."

– Michelangelo

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VITA

EDUCATION

2018	Pepperdine University Doctoral of Philosophy, Global Leadership and Change
2012	Pepperdine University Masters of Arts Learning Technology
2002	Chapman University Organizational Leadership

PROFESSIONAL SUMMARY

Matthew D.M. Watson, PMP is the Principal Consultant at 9m Consulting with extensive experience in project management, Lean process improvements, training, and organizational development. Matt began his career in the United States Air Force as a Forward Air Controller where he participated in the invasion of Iraq attached to the 101st Airborne Division. Following his enlistment, he worked as an Organizational Development Project Manager and Training Director for the Bechtel Corporation and as a Business Strategy Project Manager for Hewlett-Packard.

PROFESSIONAL EXPERIENCE

2011 to Present	9m Consulting, Principal Consultant
2014 to Present	HP Inc., Project Manager of Business Planning & Strategy
2012 to 2014	Bechtel, Director of Operations, Environmental, & Safety Training
2008 to 2012	Bechtel, Director of Radiological Training
2005 to 2008	Bechtel, Project Manager of Organizational Development
1999 to 2004	U.S. Air Force, Forward Air Controller

PUBLICATIONS

Watson, M. D. M. (2016). Fear and loathing in the accountable culture. *Organizational Cultures: An International Journal, 16*(1), 1–8. Retrieved from http://www.i-scholar.in/index.php/OCIJCG

ABSTRACT

Innovation is researched significantly throughout academic literature, ranging from leadership to organizational culture, with the aim of understanding how to enable greater creativity. This study attempted to address the knowledge gap on the common strategies of facilitating innovation in a group setting by evaluating this condition through four specific areas: environment, process, team dynamics, and facilitator behavior. This study built upon those four areas aiming to understand the process a facilitator puts a group of individuals through to stimulate innovation. Applying a qualitative phenomenological study, the researcher interviewed 15 facilitators of innovative thinking to understand the common strategies applied by practitioners in the field. Upon completion of the interviews, the best practices discovered in academic literature were compared against practitioner best practices, identifying the strategies that intersected both environments. Key elements that elicited greater innovation in a group setting were as follows: (a) leadership supporting experimentation cultures where taking risks is encouraged, (b) stretching the mind to enable ambiguous thought, (c) achieving a cognitively diverse team, and (d) striving to keep everyone engaged from the beginning to the end.

Keywords: cognitive diversity, facilitation, group creativity, organizational innovation

Chapter 1: Introduction

Chapter Overview

In Chapter 1 the background of the study will be discussed, including the statement of the problem and the purpose of the study. Then, the significance of the study will be identified, key terms will be defined, the theoretical framework of the study will be discussed, and the research questions will be identified. Lastly, the chapter will describe the limitations, delimitations, assumptions of the study, and positionality, concluding with the organization of the study and chapter summary.

Background of the Study

The majority of the companies on the Fortune 500 list innovation as one of their key strategic goals, priorities, or values. This is the belief that innovation will be their competitive advantage, their new revenue stream, and the sustainment of the company. Using buzzwords and jargon like *brainstorm, ideate,* and *value-added,* these corporations have created a new vocabulary that by word alone is intended to inspire the team and turn them into the creative elite. Yet, only a handful of the organizations will ever reach that vision of what they wrote about because the extent of their effort to elicit innovation ends with its inclusion into the shareholder's annual report.

Mitchel's (2006) study illuminated this point, reinforcing the belief that an organization's ability to create is also its main source of competitive advantage in staying ahead of its rivals. This highlights the pressures of a capitalist market where a company must continue to grow, develop, and improve upon its model to survive. While it is easy for an organization to declare that innovation will be the company strategy, that statement is based on the foundation that the organization needs an unrecognized idea to lead them to growth. The fallacy lies in that the

strategy does not call for how to elicit innovation but only that it requires it. Companies that do take action upon this statement increase their funding to their research and development departments, attempt a number of tactics (e.g., training and events to inspire creativity), or aim to facilitate innovation.

Design, innovation, and creativity reside in the lexicon of corporate verbiage, which is echoed throughout organizational settings as what is to be encouraged in organizational values and behaviors. Companies have not only seen sustainable growth through significant investments in innovation, but it has also become a trend that a lack of creativity is the quickest path to an organization's death. Rose and Thompson (2000) stated, "If ideas are the driving force behind the new economy, then the basic purpose of any corporate structure is to foster creativity and deliver innovation, which together generates growth, profits, and jobs" (p. 159). A quote of over 15 years of age has only grown to be more pertinent with the need to use innovation to remain competitive. This falls in line with the daily dilemmas that managers experience, where a premium is placed on applying problem-solving and decision making—all under the belief that generating more alternatives leads to better alternatives and overall solutions. This suggests that almost everyone is capable of making decisions, but it is rare to employ individuals that have a predisposition for developing creative alternatives (MacCrimmon, 1994).

While many have blindly followed that creativity is key to future success, there are a collection of contrarians who offer opposing thoughts that creativity, while recognized as brilliant and novel, can actually do more damage in the long run by centering an organization in a direction that is supported only by concept and cannot support the weight of the organization due to a lack of ability to execute that vision (Levitt, 2002). According to Levitt (2009), there

are only a few innovators in the world, with the rest being imitators copying the truly creative products; they are a shell of the original creations.

The debate may endure on the value of innovation to organizations, but for the purposes of this work, the assumption will maintain that creativity provides value to the organization and is to be encouraged. This will follow the thought of trying to understand if an environment can help nurture innovation, and if so, what are those elements that help create that environment. Haner (2005) wrote that organizations designed to support creativity still do not have a theoretical framework in which they can logically support their efforts and are in essence throwing everything at the wall with the hopes that something will stick.

The United States did not begin in history as the innovative powerhouse that it is today, as Great Britain and Germany were leaders in that early time period. The British brought upon the foundation of the Industrial Revolution through their engineering feats, and German scientists developed the key principles for modern physics. By the end of the 19th century, the United States had been flooded with immigrants which supplied a massive influx of global brainpower. This was a catalyst beginning with the cotton gin, the light bulb, automobile, and aircraft. At the turn of the century, the United States had now become an innovative and economic powerhouse. The country and non-profit institutes were well-known for supplying significant grant money, which helped spur and continued this force. These grants stimulated the technology growth in the defense industry taking the nation through World War I, World War II, and the Cold War. During the end of the 20th century, the United States peaked in its innovative accomplishments with the rise of semiconductors in Northern California and the explosion of the Internet, personal computing, and mobile devices. Throughout these creative peaks, the United

States gross domestic product has evolved and has been on a continued steep growth path (Whipps, 2009).

The United States continued the philosophical model for which Adam Smith laid the groundwork—capitalism being the economic and political model where a nation's trade and industry are run by profit-seeking private individuals rather than the government. Brought to prominence during the Industrial Revolution in England, it was later recognized as the hallmark of the Americas. Unique to capitalism is the theory that as businesses begin providing value to their customers, they create enough demand that employs more individuals to create more value, and with more employed, purchasing power increases, ultimately continuing the cycle of growth. On a macroeconomic scale, it is essential to maintain continuous growth for capitalism to continue to work (Heilbroner, 1995). This leaves businesses with the charge to continue to develop their businesses to increase their revenue on a consistent basis. This continuous growth is not a simplistic feat and has spurred companies to invest heavily in research and design to create new products or services to continue that growth pattern. This creates the situation in numerous organizations where inducing innovation on a daily basis is a means to survive market fluctuations, which have the potential to derail an industry.

The study of understanding how the creative process works has been a focus not only for academics but for corporate researchers as well, as the ability to enable innovation will be the knowledge management version of El Dorado. Harvey's (2014) study focused highly on creative synthesis being a routine, where an individual or a team's cognitive, social, and environmental resources are combined into a creative production. According to Harvey, group composition, team dynamics, and an environment that supports autonomy help to establish boundaries and conditions that set up a group to experience risk, failure, and learning. This also ties into the

finding that without enough conflict and failure, the group cannot engage in the synthesis process, resulting in a less creative product.

An old philosophy of organizing work around teams reappeared during design research, as it is believed that in a team-based environment, people are more apt to think creatively and the team is more equipped to find solutions that do not come from a single individual (Wolcott & Eadie, 2012). This falls in line with Guhl's (2015) study proclaiming that employees desire social connectivity during collaboration and that creativity is grown from casual, innovative conversations that have a higher likelihood of occurring in an ecosystem designed to facilitate such interactions. Hence the presence of cafes, foosball, and ping pong in numerous workspaces, which support the belief that these external mechanisms will help feed the dialogue of design (Guhl, 2015).

There have been a number of stimulates to innovation identified in the current literature, including the environmental conditions of how people are led, the driving values of innovation, and the cultural boundaries that may or may not be in place. There is also the process that organizations or teams put in place to understand customers' needs, the planning stages bringing an idea to fruition, and the ability to iterate consistently to refine the product to perfection. Lastly, there is the team and bringing in a diverse thinking collection of individuals who trust each other and can be candid with feedback.

While the building of an innovative organization resembles baking instructions where specific elements are needed, there is yet to be a true recipe for innovation. There are a number of common practices that have been attempted and tried, ranging from open to closed office areas to creativity training. Included in these artificial stimulates are leadership-driven dictates and goals for innovation, which can put a fear-based accountability system in place, or hollow

statements that are never actually implemented. Another methodology, which will be the focus of this study, is the facilitated workshop where an external conductor leads a group through exercises, events, or experiences that aim to help stimulate greater innovation.

Problem Statement

A search through the online book retailer Amazon using the term *innovation* returned 78,669 books on the subject, while a search in Barnes and Nobles identified 11,799 books. Books ranged in variety, from biographical perspectives to organizational specifics for enabling innovation. In the area of academic research, innovation is a heavily researched area where the most depth is encompassed in the process, behavior, and leadership. A deficiency in the current evidence is that research has not thoroughly examined how innovation is stimulated in a corporate group setting. This study can play a key role in organizations attempting to drive revenue growth through innovation and reduce their costs in the development of new ideas. While a number of organizations inherently believe that their organization is in need of innovation, there is a lack of organizational understanding on how to elicit innovation.

Purpose Statement

The purpose of this study was to determine the best practices exercised by facilitators to elicit greater innovation from a group of participants. This will be a key understanding for organizations aiming to stimulate innovation within their organization. Additionally, the study intended to determine how facilitators measure success and their recommendations for future facilitators. The purpose of this study was to explore innovation through four related research questions.

Significance of the Study

The findings of this research will identify contemporary common practices for facilitating innovation that are presently being applied to Fortune 500 companies in the United States, and in some cases outside of the United States. The current literature focuses on a wide range of topics, including individual cognitive processes involved with creativity, team dynamics for creativity, and the need for innovation in organizations. This study will build upon these three areas specifically in understanding the process a facilitator utilizes with a group of individuals to stimulate innovation, and the associated outcomes for the organization.

This study will prove its importance to society in three key facets. The first is that this study will help to understand the gap between wanting to be innovative and being innovative. Secondly, this study will identify a strategy and process for how to bridge this gap through facilitation, which should provide a roadmap for any organization on how to elicit greater innovation during planning sessions. This leads directly to the third key importance, namely that greater innovation expressed by organizations will lead to greater societal impact through advancements and efficiencies.

Definition of Terms

Facilitator of Innovative Thinking: An individual that enables creative thought in a group of participants in the areas of strategic planning, business development, and product conception

Innovation: The introduction of something new; a new idea, method, or device ("Innovation," n.d.)

Creativity: The ability to make new things or think new ideas ("Creativity," n.d.).

Facilitation: The increasing of the ease or intensity of a response to repeated stimulation ("Facilitation," n.d.).

Ideation: The capacity for or the act of forming entertaining ideas ("Ideation," n.d.).

Brainstorming: A group problem-solving technique that involves the spontaneous contribution of ideas from all members of the group ("Brainstorming," n.d.).

Environment: The aggregate of social and cultural conditions that influence the life of an individual or community ("Environment," n.d.).

Prototype: A first full-scale and usually functional form of a new type or design of a construction.

Simulation: The imitative representation of the functioning of one system or process by means of the functioning of another ("Simulation," n.d.).

Strategic planning: A systematic process of envisioning a desired future, and translating this vision into broadly defined goals or objectives and a sequence of steps to achieve them ("Strategic Planning," 2016).

Organizational culture: The set of shared attitudes, values, goals, and practices that characterizes an institution or organization ("Organizational Culture," n.d.).

Theoretical Framework

When determining the research methodology, it was determined that this would be a qualitative approach. Instead of confirming a hypothesis, this study sought to explore and understand the phenomena of facilitation and how it interacts with the innovation process. This led to determine that the epistemology would be subjectivism, as it was not believed that there was an overall correct methodology or process, but rather that is was more important to understand the process. This led to the data being collected as a narrative of how the process worked versus counting the number of unique innovations developed. It was also determined that the process of evaluating a number of different organizations' strategic planning process,

that it would be best to design the research with a higher level of flexibility. Lastly, a qualitative method was selected as the results of the facilitated events were subjective in nature, helping to explain experiences versus presenting a specific outcome.

Research Questions

The overarching research question was as follow: What are the best practices of facilitators to elicit innovation? The associated research questions that guided this study are as follows:

- What environmental factors are beneficial and counterproductive to group innovation?
- What process designs are beneficial and counterproductive to group innovation?
- What team dynamics are beneficial and counterproductive to group innovation?
- What facilitator behaviors are beneficial and counterproductive to group innovation?

Limitations

This research was a descriptive study that used a qualitative approach. The qualitative methodology applied was phenomenology and the research was conducted through interviews. Creswell (2014) defined a phenomenological study as a study where individuals describe how they perceive a phenomenon based on their personal history and experiences. There are specific limitations to a phenomenological study which includes the assumption that the memories of these facilitators are accurate (Rudestam & Newton, 2007).

Additional limitations include that participants may have varying definitions of creativity and innovation, or they may consider these terms as synonyms. Facilitators that will participate will inevitably apply different workshop structures and techniques during their experiences, which will have varying outcomes and possible interpretations. Lastly, each participant facilitated events in different industries, work cultures, and leadership structures; it is important

to note that some techniques applied in one organization will not necessarily be effective in another organization.

Delimitations

The boundaries of this research will encompass the experience of only the facilitator and the facilitators' impressions of their performance. In this study, the researcher did not speak with participants of facilitated innovation workshops. In addition, the reporting of documented outcomes of events to show their effectiveness was outside the scope of this study.

Assumptions

- It was assumed that individuals involved in this study would be candid and forthright about their experiences with facilitation and participants. It was also assumed that the facilitators would be trained at the expert level in their skill and that the participants would be considered the subject matter experts in their chosen field.
- It was assumed that the participants in this research would have facilitated innovation events that were considered successful as well as events that were considered unsuccessful.

Positionality

Acknowledgment of personal bias is an important process for any and all research (Creswell, 2014). There appears to be little practical information on how innovation is facilitated. Thus, the researcher decided to pursue this project based on personal experiences of individuals wanting to leverage the power of facilitating innovation, but not necessarily knowing how. The researcher's professional experience in organizational development and facilitation, as well as the academic pursuit of the study of innovation, has shaped the researcher's perspective on what types of environments are most impactful. This led to the researcher's bias that

facilitation is generally advantageous. It should be noted, however, that facilitation is not always the most effective way to garner innovation. Certain situations and followers may require less structure in a given context. The researcher's bias toward views of facilitation and the power of expressions of facilitation likely had an effect on the research design and methodology.

Organization of the Study

This research is organized into five chapters, where Chapter 1 introduces the subject matter, the problem statement, and the purpose of the study, the identified research questions, and the importance of the research, assumptions, limitations, delimitations, key terms, researcher positionality, and the research's theoretical framework. Chapter 2 reviews the relevant literature on innovation and facilitation, focusing on the ways facilitation could lead to innovation. Chapter 3 defines the epistemological framework used in this qualitative study, as well as the philosophical foundations, research design, plans for Institutional Review Board approval, population description, data collection procedures, and data analysis process. Chapter 4 discusses the findings of this study. Chapter 5 provides the implications of this study's findings, recommended directions for future research, and final thoughts from the researcher.

Chapter Summary

With innovation being at the forefront of capitalistic success, organizations are actively pursuing a variety of different methodologies to induce the growth and development process of creating new products. This sometimes comes in the form of written instructions, additional funding to research and development departments, and facilitated workshops, to name a few methods. This study explored facilitated workshops through the eyes of the individual facilitators who design and lead these innovation sessions. This will be a qualitative study using a phenomenological method and interviews to understand this process and to identify best

practices utilized by facilitators. This study had some limitations, as it was aiming to establish a descriptive narrative on the process and how it is applied; it did not focus on the outcomes of the actual events described.

Chapter 2: Review of Literature

Chapter Overview

This chapter provides an overview of innovation, beginning with the history of innovation, the origins of the study of innovation, and contemporary theories focused on innovation. Then, the mental process that occurs during innovation, the motivations for why an individual will create, and the ideal conditions for innovation will be discussed. The second half of the chapter will focus on the team process of innovation, attempting to outline the organizational design for greater innovation, the culture that supports creative initiatives, a team's creative process, and the conditions and environment used for stimulating innovation. Finally, the chapter will focus on facilitation, determining the effectiveness of facilitation, and setting the ideal conditions for effective facilitation.

Context

The purpose and overarching research question of this study was to determine the best practices exercised by facilitators to elicit greater innovation from a group of participants. This was considered key to understanding how organizations stimulate innovation. The study intended to determine how facilitators measure success and their recommendations for future facilitators. Four related research questions guided this study:

- What environmental factors are beneficial and counterproductive to group innovation?
- What process designs are beneficial and counterproductive to group innovation?
- What team dynamics are beneficial and counterproductive to group innovation?
- What facilitator behaviors are beneficial and counterproductive to group innovation?

Conceptual Framework

The conceptual framework of the review of literature is predicated on four key learning areas of the research. The first area consists of understanding what is currently known about innovation and what are the theories that have built the framework around the phenomenon. The second area of focus centers on the processes of individual innovation, from the cognitive processes to the set conditions that help enable creativity in an individual. The third area focuses on the creative processes for group innovation and the differences between a group process and individual creative process. Lastly, the fourth focus area is understanding the physical creative environment and the facilitation of innovation (see Figure 1).

History of Innovation

The historical study of the origin of innovation begins long before the ability to document these feats of creativity. Fortunately, through archeology and the efforts of anthropology, mankind has been able to piece together a collective story of the history of man and the technology that he has created to help progress his journey. There are countless debates on the top innovations of all time, which range from the generation of stone and bronze tools to the wheel and gunpowder (Andrews, 2012). Less tangible innovations infuse themselves into the debate calling out the creation of banking and economics to art and the beauty of the Sistine Chapel. Mankind is now in the age of a massive innovation flux, running back from the origins of harnessed electricity to the mobile technology transformation that is currently being experienced (Johnson, 2011).

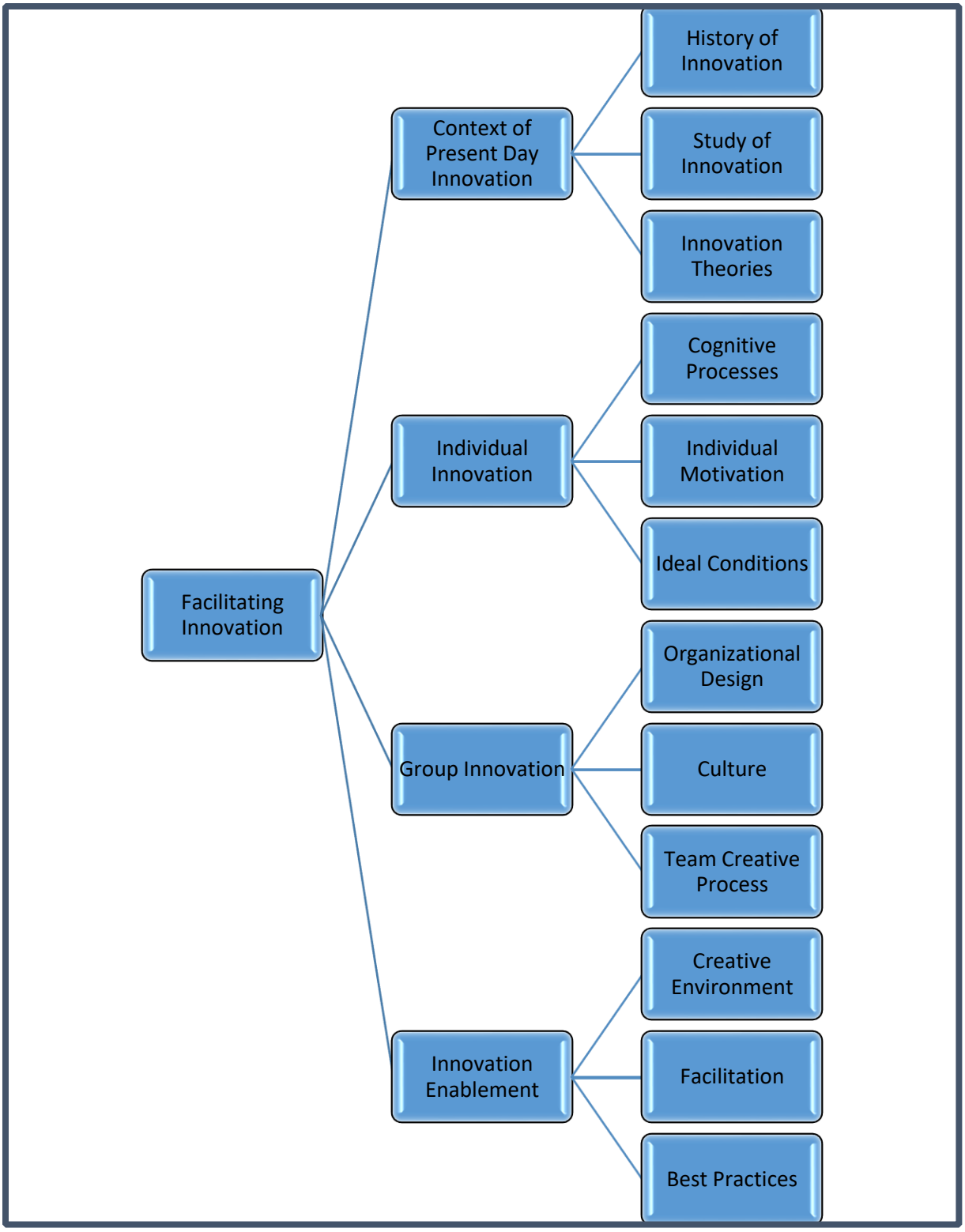

Figure 1. Conceptual framework.

One fascinating aspect of innovation is that there are groupings of inventors throughout times and periods versus a periodic rise of inventors. For example, there was a tight bonding between Socrates, Plato, and Aristotle, the great philosophers of Greece. The Renaissance era included artists such as Leonardo DaVinci, Michelangelo, and Botticelli. The modern capitalist era which rushed market-changing innovation includes Thomas Edison and Nikola Tesla, as well as J. P. Morgan and George Westinghouse. Eysenck (1995) pointed to these groupings as an explosion of collaboration upon which ideas, competition, and kindred minds flourished in the right environment

The 21st century has brought us a new explosion of the right environmental conditions and the available talent to capitalize on such condition. Personal computing and the Internet have brought significant market changes in how businesses operate, which has fueled the growth to create products that align with the consumer. This shift toward technology gained steam with Bill Gates, Steve Jobs, and Steve Wozniak's advances in personal computing. Larry Page and Sergey Brin maximized the personal computer by developing the Google search engine, and Elon Musk started with Internet banking and has continued to innovate with electric cars and a privatized space program. This has signaled an enlightened era of innovation where the realms appear to be boundless (Johnson, 2011).

Origins of the Study of Innovation

The origination of the study of innovation is actively debated back to the Book of Genesis, yet most would credit a variety of authors during the Renaissance. More profoundly though was during the Enlightenment period, when Thomas Hobbes (1651/1986) wrote in *Leviathan* that imagination is key to human cognition. Around the same time, fellow

philosopher Descartes (1641/2008) wrote in *Meditations* that man needed to put imagination to work as it was an analytical model for conceiving.

In a more modern approach, Hermann von Helmholtz and Henri Poincare began to document their creative processes in mathematics and science in the late 1800s and early 1900s, which was a first for the scientific community. Later in 1925, Graham Wallas published the book *The Art of Thought*. This work outlined his theory on how creativity works, whereby there were four stages of the creative process: (a) preparation, (b) incubation, (c) illumination, and (d) verification. These were the great predecessors in the field prior to the boom of the 1940s when technological innovation went from an interest to a necessity (Eysenck, 1995).

Contemporary Innovation Theories

J. P. Guilford (2017) modernized much of the initial thought on creativity during his time in the Army Air Force in World War II working as a psychologist. His key assignment was working with a psychological research unit, where he refined his work on aptitude tests to select aircrew trainees. This brought about his desire to understand the diversity of ways in which a mind operates and uncovered divergent thinking in this process. Guilford's concept of *divergent thinking* focused on the ability to generate multiple creative ideas versus identifying a single idea or solution. He proposed that there were four key characteristics to divergent thinking, the first being fluency and the ability to produce a massive amount of ideas. Second was a level of flexibility, in which a person is able to simultaneously propose a variety of approaches to a specific plan. The third is originality and the ability to produce original thoughts and ideas, followed by elaboration, which is the ability to synthesize thoughts into an organized plan to carry to fruition (Guilford, 1959).

This work was followed by Arthur Koestler's (1967) work, *The Act of Creation*. His research focused on the process from discovery to the invention, where his intent was to define an all-encompassing theory of creativity. Koestler concluded that there is a conceptual blending in the creative process where two unrelated ideas are blended into one to create something new. He coined the term *biosociation* as a result of this blending technique (Koestler, 1967).

In 1992, Steven Smith, Thomas Ward, and Ronald Finke collaborated to develop their creative cognition approach to creativity. Published in their book, *The Creative Cognition Approach*, the trio proposed that creativity is a two-phased approach whereby individuals or groups experience a generativity of mental constructions; in the second phase, they use these structures to build upon and create innovative ideas (Finke, Ward, & Smith, 1992). This comes from the camp in which the belief is that all new and creative ideas are based upon the scaffolding of another idea and can become predictable in nature (T. B. Ward, 2001).

James C. Kaufman, while a professor at California State University, paired with Ron Beghetto to develop the four-C model of creativity. The four-C model breaks down into four components, where there is a *mini C* of transformative learning, a *little C* of everyday problem solving, a *pro C* which pertains to creativity at work, and a *big C* where an individual is great in their given field (Kaufman, 2009).

In 2010, Sébastien Hélie and Ron Sun published their explicit–implicit interaction theory, which was a proposed framework for understanding creative problem-solving. In an attempt to explain the phenomena of creation, they delineated that there is a mutual balance between implicit and explicit knowledge and that they are both used in most activities. Through the redundancy of information, the mind is able to process through iterative cycles and thus create upon these cycles (Hélie & Sun, 2010).

In 2016, Liane Gabora (2016) proposed her honing theory as an explanation of creativity. The theory is tied closely to the self-organizing nature of mankind, which tends to adapt to environments. The honing theory suggests that creativity follows the same course of adapting and evolving with its environment (Gobora, 2016).

Mental Process of Innovation

While there are numerous theories and extensive research has been conducted, a complete picture of how the brain innovates has yet to be discovered. Sowden, Pringle, and Gabora's (2015) research described the dual process model of cognitive information processing, which explains two types of thoughts: memory-dependent thought and hypothetical thought. Their findings suggest that the creative process is based on the foundation that the mind shifts between both thought processes repeatedly as it synthesizes both realities. This implies that there is a possibility that through the facilitation of time-shifting activities, there can be a high enablement of creative thought (Sowden et al., 2015). Some biologists report that through the vast amount of available data that the human mind will go through, a similar dual process synthesizes mass amounts of information into actionable data through the use of mental intuition and converting data into creative action (Marder, 2015).

Heilman, Nadeau, and Beversdorf (2003) discussed creative innovation as the ability to understand and express novel orderly relationships. This follows the belief that individuals hold a high-level general intelligence, domain-specific expertise, and specialized skills as essential innovation components. The specialized knowledge is stored in the temporal and parietal lobes, suggesting that some highly creative individuals may have alterations in that architecture. Overall, the team's findings suggest that innovative people may be endowed with minds that are capable of storing more specialized information in their temporoparietal cortex, enabling the

ability to apply divergent thought, thus fostering the uncovering of extensive orderly relationships (Heilman et al., 2003).

This elicits the question of whether there are certain attributes that make a person more creative. Hayes believed that creative people worked very hard, were more predisposed to working independently, strove for being original, and were more flexible, but did not necessarily have higher IQs. Hayes (1990) brought to light that there are no cognitive ability differences between creative and non-creative people.

One very common perception was the left and right brain explanation to creativity. This was seen in the work of surgeons and neuroscientists in 1970s, who sought relief for epileptics by severing the corpus callosum, which is the largest connection between the left and right brain hemispheres. Patients undergoing these procedures did find relief, and significant cognitive differences came to light (Kosslyn, 2014). The theory evolved more where a person had a preference and used one side of their brain more than the other, where the *left brain* was coined as logical, analytical, and objective while the *right brain* was to be intuitive, thoughtful, and subjective (Cherry, 2017). As this theory populated society, it was later debunked as following studies showed that both sides of the brain work fluidly together through a number of connections and that humans do not have a preferred or dominant side of their brain (Kosslyn, 2014). In a follow-up study, Dunson and Durante in 2017 found a significant connection between brains of highly creative people, speculating that the more connections a person has between their brain hemispheres, the greater their creativity (Durante, 2017).

Limb, Kemeny, Ortigoza, Rouhani, and Braun (2006) focused on jazz musicians and the mental processes experienced during their improvisation. Their study found that during improvisation, the dorsolateral prefrontal cortex of jazz musician became less active, where it

typically is the part of the brain that guides self-inhibition, planning, and control. Unusual enough, similar studies showed that during creative events in others, the activity of their dorsolateral prefrontal cortex sped up, which left Limb et al. to conclude that creativity was a variable phenomenon dependent upon the individual.

Some discoveries have identified that an individual does not develop a mental image and then apply content or functionality of what that image can do; rather, these processes combine whereby ideation fosters the imagining of a functional framework. Typically, this is aligned with a scaffolding technique, which is the transforming and upgrading of current items using them as a launching pad to a new invention (Wiltsher, 2012). This follows down the process of how individuals actually create. Does this happen during team collaboration meetings—staring at a dimly lit desk, walking in the park—or can this process of creation happen anywhere, at any time, similar to a lightning strike? Csikszentmihalyi's (1990) study of mental flow identified in that a person's ability to control one's mental attention to complete focus leads to the successful achievement of innovative work.

Li et al. (2014) focused on personality factors to become open to new ideas and the correlation to innovation. Their findings suggest that openness to experience, extroversion, conscientiousness, and agreeableness all contribute to creativity. The personality trait of openness played the biggest role in shaping personality trait of creativity (Li et al., 2014). Cadle's (2015) study on the gap between creative thinking and creativity found that creative thinking can be trained, taught, and facilitated, but the second key ingredient to a creative endeavor is the execution of the idea. This points out that the traits of drive, commitment, and tenacity lead to creative thought, ultimately fostering innovation; these traits, however, cannot be trained, taught, or facilitated (Cadle, 2015). Friedman's (2015) view of creativity and mental

health explains the role of creativity in the link between hypomania and temporal lobe epilepsy. According to Friedman, these conditions—induced naturally or through illicit drugs more—suppressed anxiety and increased brain activity, leading to a greater expression of suppressed thoughts, and thus more creativity.

Divergent thinking is also a useful measure of creativity. Jung et al. (2015) found that cortical thickness in left frontal pole and left parahippocampal were directly related to high divergent thought and creativity. These findings implied that these stimulated brain regions are involved in thinking about the future and extracting future prospects (Jung et al., 2015). Additional research on divergent thought has found links between the resting mind before and after training. Cousijn, Zanolie, Munsters, Kleibeuker, and Crone (2014) found that there was a link between divergent thought and resting-state functional connectivity in a task-positive network, thus bringing us closer to understanding how the brain operates between creativity and cognitive processing.

Stokes (2011) pondered that the typical creative process has an association with a non-truth bound cognition and that imagination is truly the manipulation of the human cognition, thus creating a cognitive freedom that is restricted by the bounds of the known world. This leads one to believe that in part the ability to generate creativity is, in essence, the ability to effectively lie to oneself and believe it. It is speculated that this process begins in childhood, where each time a child views a book with pictures, they connect their lived experience to the pictures they see. Each time this occurs, the child is able to stretch their abilities of creativity in moving beyond what they currently know about what is possible (Helmly, 2010).

Motivations for Individual Innovation

With every action, there is an antecedent and motivation for that action. A number of antidotal speculations litter corporate organizations as to what truly motivates an individual to be creative. A number of scholars postulate that intrinsic motivation empowers individual innovation. Grant (2011) found that intrinsic motivation was influenced even more by additional psychological processes, such as perspective taking brought about by the encouraging of creativity. Dewett (2007) held a similar belief on intrinsic motivation but found that an individual's willingness to take risks mediated or accelerated an individual's intrinsic motivations pertaining to innovation.

Finding the discrepancies between romantic literature and scientific evidence, Eisenberger and Shanock (2003) found that each camp had very narrow perspectives on what drove innovative motivation and concluded that rewards for novel creative performance increased intrinsic motivations to continue to excel in creative performance. Cooper (2006) followed up this research to counter that rewards detracted from motivation and found that obligation to either an individual or organization supported motivation for innovation.

Mack (2015) looked at the phenomenon of crowdsourcing for new product development, which is built upon the idea of collecting a mass of ideas from a large source of customers, typically during contests in which individuals whose ideas are selected receive an award or accolades. The study found that the extrinsic motivations and having a higher level of domain knowledge had a direct effect on the success of ideas selected versus those participants who held a greater intrinsic motivation with a lower domain knowledge (Mack, 2015). Pairing this study with Baer's (1998) study, which found that evaluation of work lowered the creativity of middle

school girls but not of middle school boys, leads the reader to believe that extrinsic motivations for creativity are still dependent upon the individual's preferences.

Conditions for Individual Innovation

One major factor in innovation and creativity is the environment in which it is spurred, though motivations may still exist if an environment is not conducive to eliciting or empowering innovation. Evaluating a sample from China in which the leadership culture was noted as controlling and coercive found that focus on intrinsic and extrinsic motivations for creativity was ineffective in boosting creativity because employees had a legitimate fear of stepping out of the normalized behavioral patterns (Hon, 2012). While fear has been known to elicit creativity in prisons out of survivability, these same conditions are not translatable into a corporate structure.

Yidong and Xinxin (2013) studied cognitive evaluation theory in China and found that within the confines of a business setting, innovative work had a direct correlation with ethical leadership. The additional research discovered that the cultural respect placed on trust led to the belief that the employees were in a safe environment, allowing them to cognitively explore without repercussions. There is another factor which has been identified in setting the right cognitive conditions for building, creating, and restarting initiatives. Dai, Milkman, and Riis's (2014) experiments found that individuals were more likely to start a new initiative either after a birthday of the start of a new week, month, year, or semester. The finding hints that there may be temporal landmarks in the mind where an individual may create a mental separation from an imperfect previous self to a new aspirational future self. This is interesting from the standpoint of leading new creative- or innovation-based initiatives, which may be more effective at the beginning of a quarter or year versus in the middle of an annual process. For workshops, this

also signifies that they may be more effective on a Monday instead of in the middle or at the end of the week.

One of the correlated leadership attributes to innovation is enablement and the facilitation of a creative environment. This begins in the recruiting process of creating a culture that attracts knowledge workers who can handle a high level of ambiguity and are able to act in the face of adversity, rather than individuals who merely wait for their manager to delegate what they need to do (Claret & Dickson, 2016). This leads to the Belenzon and Berkovitz (2010) finding that the overwhelming belief is that corporate leadership is risk averse and routinely rejects projects because there are no quantitative methods to measure if the project is successful and if it should continue to be funded. This belief drives down the culture of creativity, and is carried from organization to organization, with little indication given from corporate offices. One belief is that true enablement begins with the organization focusing on the effective use of technology, environmental responsibility, and the opportunity for global cooperation (McCraw, 1996). This relates to the previous finding that creativity and innovation tie back to a purpose to which a team or individual can directly relate.

There is a dark side of leadership that can have a direct negative impact on creativity and productivity. Studies by the University of Southern California found that incompetent managers were more likely to denigrate the competence of an employee who proposed a new solution that was different from their own. These managers were primed to feel incompetent and were threatened, ultimately terminating the flow of new ideas (Fast, 2014). This further illuminates the point that leadership creates the culture and that culture sets the tone for innovation. If leadership cannot enable the culture of the free flow of innovative and candid thought, this will have a direct effect on the lack of creativity the organization will experience. This will also

serve as a strong self-assessment or diagnostic tool for organizations to find the root cause of its lack of innovation.

A question that arises is if innovation is the responsibility of everyone. Many organizations have very structured and formalized position descriptions that limit the ability of an individual to breach the heavily defined boundaries. This creates a workplace environment in which employees do specifically what they are told to do; deviation from this model could have negative consequences. There is a polar opposite philosophy in which there is an expectation that innovation is the responsibility of everyone in the organization. This is not intended to be a passive value, but rather an enabler, allowing the workforce to continue to drive growth and development in a manner that only truly creative thought can. This is creating a unique challenge for human resources and leadership, namely balancing compliance with nonconformity. This raises the question of whether boundaries can be drawn around innovation. A number of organizations continue to struggle with these questions and have been shaping their corporate ethos and model through extensive training efforts facilitated by renowned innovators to initiate the type of design thought to bring about creation and to develop balance between original thought and adhering to the corporate culture, values, and established policies (Schrage, 2016).

This poses the question, can organizations truly put themselves in a position to innovate accordingly to keep up with the competitive market? A study of CEOs and over 3,500 workers from first-world industries found that CEOs wanted innovation throughout their entire workforce to maintain their competitive edge. Unfortunately, the results of the survey found that the majority of the workforce has heard this message but does not have the resources or authority to enable innovation. Further, findings point that leadership does not elicit creative work or the

possibility to do so. This has the possibility to create a significantly negative effect, where innovation can come across as hollow words, leading to worker cynicism and disillusionment (Sturt & Rogers, 2016).

Shifting focus from the organizational confines to the perceptions of creativity in the human mind, Modig (2012) found that creative messaging and branding in advertising enabled a greater cognitive response in individuals, thus resulting in a more favorable brand response. This was used in advertising but can also be applied in organizations, which can change their branding with not only their customers but also with their employees. This raises the question of how to craft this messaging with employees to alter their organization's internal branding (Modig, 2012). Khanna's (1989) research identified that respect of a person's culture and experiences in line with the person-centered leadership principles of empathy, congruence, and prizing led to a cross-cultural design setting enabling a diversity of thought. This aligned with the early medical pioneer Doctor Cushing, whose commitment to solving problems using multiple perspectives to progress mankind may have helped to identify innovators' foundational traits (Toledo-Pereyra, 2008). Park's (2004) study of project managers identified that there were two key elements to higher elevation: (a) normative pressure created by the project, which leads to fostering attitudes; and (b) the facilitation of an organizational culture that highly encourages creative problem-solving. As Park's focus remained with the individual, Aime's (2014) study found that the most innovative work was from workgroups that shifted power, authority, and leadership among the team members.

This also brings about a leadership ethical dilemma where a strong tie was found between creativity and dishonesty. This, in turn, led to understanding how the two ingredients play a role in product development in an organizational setting leading to a leadership concern, as the

potential to enable innovation also has the potential to enable ethical indiscretions (Gino & Ariely, 2011). Yet, Samuelson (2007) found that by using imagination in a moral setting, creativity can be used to develop false experiences that lead to higher levels of moral reasoning. Gino and Ariely (2011) did state, however, that "to the extent that creativity allows people to more easily behave dishonestly and rationalize this behavior, creativity might be a more general driver of this type of dishonesty and play a useful role in understanding unethical behavior" (p.12).

A question that a number of leaders ask is "How do I build a culture of innovation?" In a study focused on the United States Navy, Grant (2016) found that this military branch recognized that their multiple levels of bureaucracy had become amazingly adept at squashing innovation and creativity, therefore putting the branch in a vulnerable state. The Navy thus commissioned a rapid-innovation cell consisting of a collection of unique junior officers who had been delivering results in the form of new weaponry and strategic concepts, management models, and training. The Navy attributed the success of this innovation cell to the culture that it created within the confines of a highly bureaucratic ecosystem. This cell is based on a number of philosophies and behaviors that have shaped this culture, which consists of candid communication, lowest level empowerment, entrepreneurialism, and a lack of conformity (Grant, 2016). This runs counter to many of the values and beliefs that the Navy culture rewards, and the creation of a counter-aligned suborganization brought about a new model, igniting innovative growth within the confines of a major bureaucratic beast. Many of the claims for establishing an open-office environment to evoke innovation and collaboration are linked to surface experiences that have resulted in highly collaborative endeavors. For example, Ed Catmull (2014) who helped lead Pixar into a creativity-renowned company stated that his creativity philosophy was

simply to put smart, passionate people in a room together, and encourage them to be candid. Some of these original thoughts came from Kanter's (1982) work on the study of creation, where he believed that extraordinary creation came from situations where a number of people from a variety of areas came together for a shared goal, offering a variety of perspectives and specialties, ultimately providing not only a system of checks and balances, but also an out-of-the-normal event to help generate something new.

Wang and Ma's (2013) research found that job satisfaction actually reduced innovation and creativity because individuals or teams reached a level of comfort that led to a detriment in innovation. Csikszentmihalyi's (1990) work on flow, being in a state where a person is fully immersed in a specific task or project, has influenced organizations. Organizational cultures that include flow in their design are more likely to foster creativity. Cseh, Phillips, and Pearon (2014) suggested that flow has a long-term impact on new product design rather than an immediate impact.

Achieving a culture of optimal creative experience can only come to fruition in a culture that is built upon these foundational expectations, which resembles a Bill of Rights guaranteeing the inclusion of these elements. Pearson (2002) offered a different opinion in terms of expectations. Major breakthroughs are often a misconception, and that the expectation for teams and individuals needs to be placed on small and steady innovations and enhancements. This aligns with executives establishing specific, measurable, achievable, relevant, and time-bound goals. It also provides the creator with the ability to creatively build through a scaffolding process of building new ideas off of other new ideas (Pearson, 2002).

With expectations comes the probability of accountability and rewards for the process. Rewards as a motivator can be a complex stimulus that have the potential to create the opposite

effect of what was intended. Terwiesch's (2008) study found that during open innovation contests based on the sharing of a reward, not the overall control of the patent, led to a massive underinvestment of cognitive effort by the inventors (Terwiesch, 2008). Some studies have, however, identified that being able to apply a weighted average to an innovative team has the ability to maximize group contribution, balancing individual and team rewards for the impact provided (Katzenbach, 2015).

Chen and Sengupta's (2014) experiments found that being forced to engage in a vice or pleasurable activity actually led to greater creativity. Mandating a pleasurable activity reduced the culpability typically associated with the activity, ultimately driving innovation and a sense of happiness. This relates to leadership giving permission to employees to engage in guilty pleasures, transitioning their mind from compliance to an indulgent state. This is also the same transformation that can help enable creativity by transitioning the mind from the structured cultural norms to a new mental state where individuals have permission to try something new and are encouraged to try and fail instead of trying something new and being held negatively accountable for failures (Chen & Sengupta, 2014).

Essential to the creative culture is the organizational structure, which has the ability to eliminate or enable innovation merely out of the alignment of resources. Swanson (1994) explored the traditional views of organizational and new product creation, which have become synonymous with small, incremental administrative and process innovations of significantly lesser value due to executives verbally encouraging innovation but not providing the resources to effectively create a bold new structure (Swanson, 1994). Researching earlier theorems, Ayres (1979) pointed out that using the independent project approach was a self-limiting proposition in comparison to a functional approach based solely on the multiple numbers of interactions that are

created by the functional structure. With the multiple of functions and the multiple of interactions, this all would lead to the multiple of social interactions that would dramatically increase the possibility of spontaneous idea generation (Ayres, 1979). Karim (2015) viewed organizational structures as having the potential to impact creation by aligning complementary functions such as knowledge and physical resources. Cohen (2009) followed this up with his comparison to architecture, where there must be extremely detailed and laid out plans to promote communication and create a nonhierarchical environment.

With structure comes the potential for the centralization of resources and possibly knowledge. Balkwill (1999) was a proponent of strong centralization, which, in essence, was equivalent to a conductor, as it was key to keeping innovators together, funded, and creating continuous wealth. However, follow-up research showed that centralization had a severely negative impact due to its influence on reducing risky behaviors as opposed to encouraging discovery-based innovation. In essence, it reduced the ability to resolve non-routine problems and drove people to search for answers and permission from their supervision (Jansen, 2006).

In 2006, Shipton aimed to discover if there was a correlation between human resource practices and organizational performance. He discovered that an emphasis on training, performance appraisal, and exploratory learning had a direct effect on a company's level of innovation, including the number of patents (Shipton, 2006). This point was further argued by Bhaduri (2011) in that an organization needed to find a combination of both intrinsic and extrinsic motivations to enable a three-stage ideation process, which consisted of idea generation, experimentation, and application.

A typical organizational complaint is that there is a lack of creativity in the organization, leading to the conclusion that innovation wasn't valued during the hiring or management

process. This calls upon the finding that there are no reliable creative processes, templates, requirements, and so on that replicate the creative process, and any individual can suddenly become and apply creativity in any given scenario (Pearson, 2002). This also brings to light a typical new product creation whereby products have acceptable design requirements identified by customers to help refine the creation of a product and give the organization an indication of the probability of success (Williams, 2007). While this a typical innovation process for new products, it also leaves giant gaps in how an individual or team moves from customer desire to finished product.

Organizational Design for Innovation

Hiriyappa's (2009) writings discuss the importance of organizational structure and how it can impact a number of environmental conditions, including organizational innovation. While the organizational structure is an elementary concept of division of labor for task efficiency and mission alignment, its main key is the coordination of independent functional organizations for mission-critical tasks. This is the ability to centralize and decentralize the decision-making process to align with the organizational strategy. This inherent control and lack of control in purposeful situations is the foundation of the environment. Under the belief that there is no optimal organizational design due to the ever-changing of the environmental dynamics, it is pointed out that being able to apply a decentralized model of decision making in creative workplace sectors helps to enable innovation. Hiriyappa also pointed out, though, that by adjusting an organization to match the strategy, new problems will arise as the administrative controls are adjusted to the change and a periodicity of time will occur until optimized performance levels are achieved.

Daft (2013) continued this study, further exploring how interacting aspects of an organization become the basis of the environmental foundation. Taking into pieces the specific parts of the organization from the population, technological capabilities, culture, workplace norms, and strategic objectives, he postulated that these factors are the make-up of the environment (Daft, 2013). More importantly, these factors not only have a singular effect on the organization, but their interactions with each other also play a substantial role in how they shape the environment.

Diving deeper into the overall study of organizational design, two main methodologies arise pertaining to the overall purpose of organizations. The first is the formal structure, which is based upon repeatable processes and enables the stability and efficiency of organizations. The second structure is the ad hoc structure, which is representative of a specific purpose of a unique aspect. This comes in the form of a project, a new initiative, or what is seen mostly in entrepreneurial startups. This is designed for a specific purpose that has a termed half-life, and the structure is not intended to be maintained following the project (Hunter, 2015).

Huber (2016) took these works and identified that there was a perception that there were key areas which executives needed to accomplish for their organizations to enable innovation, anticipate market changes, and to shape their environment into a high-performing innovation environment. His study focused on the decreasing of structural levels in an organization and the increasing of structural networks and platforms. This revealed that in the end, the organizational design had no effect on organizational performance or adaptability. This study is found to be the contrarian in terms of structural design; that is, organizational design is not inherently linked to cultural factors (Huber, 2016).

Helfat and Karim's (2014) work supports Huber's claims as well indicating that despite all of the research that has been conducted, little has been discovered about the link between organizational routines and organizational designs. Helfat and Karim proposed that an organization's ability to design specific routines to align to dynamic and static models could lead to an organization's ability to elicit divisions of creative and unique work, while the other half of the organization focuses more on the static and routine-laden environment (Helfat & Karim, 2014).

Baldwin (2012) theorized that while we have placed our attention on the corporation over the past 100 years while studying organizational design, it is no longer sufficient to evaluate just one organization but rather entire industries. Industries are so closely linked and the continual movement of employees between companies has led to a much larger interconnected system. Furthermore, he identified that the main problem for organizational design in the future will be the distributed innovation in these subcultures and to integrate radically diverse individuals into an innovation network. Baldwin concluded that it is necessary for organization designers to factor in the distribution and integration of property rights, people, and actions across many independent self-contained organizations.

Innovative Culture

A number of studies identified that the main key to environments of innovation were not the office design but the culture, values, and leadership that enable the design thought process. Öberg (2012) found that meaning and purpose were the biggest drivers of innovation. If a team has a capability to associate a meaning to a product and a purpose (i.e., impact on the world), it can drive the cognitive focus to a social focus, enabling a larger body of participants focused on one objective. This fell under the belief that this type of creativity is different, and a different

approach is needed to achieve it. This is supplemented with the research that found that there was a relationship between creativity, values, and performance, and these were reinforced through establishing job satisfaction, shared values, intellectual stimulation, challenging work, self-perceptions of creativity, and leadership (Leigh, 2011).

The previous focus has been on the collaborative experience from in-person teams to virtual teams, but there are still aspects of the singular process of creation that need exploring, especially in terms of an individual's connection to his or her office space. Hubbard (2014) believed that to be creative, individuals must connect emotionally to their office space, and individuality must be expressed in order to achieve this. Yet, other researchers identify that tension is more pertinent to innovation than comfort and individuality. It is believed that creative teams should have enough challenge and requirements to frame the work and engage the individual or team's enthusiasm. This will only work if the individual is empowered to make decisions, adjustments, and fail (Rosso, 2011). Baker and Freeland (1972) emphasized that while it is important to create ideas, idea creation is not the end goal; rather, ideas must be put into action. It is imperative for the innovator to not only generate the idea, but to also be able to communicate the idea and conceptual model to the right individuals to the help drive action and bring the idea into reality (Baker & Freeland, 1972).

With each environment, there is a level of control and a certain level of being out of control to break the limits of perceived manifestations. Austin (2012) called for accidents, breakage, malfunctions, and moving outside of intention to reach a point where individuals are out of control and not entirely sure where they are within the parameters of what they are intending to accomplish. For, true creativity is beyond the predictability of expectation and a certain balance or level of risk must be achieved and made possible in the environment to bring

this state to fruition (Austin, 2012). Additional research follows this train of thought where there are inherent and fundamental obstacles to innovation, including infrastructure, narrow-mindedness, and early failures. These three barriers contribute to shorting innovation projects due to an organization's natural inability to ignore risk and be out of control.

The rewarding of risk has long been a tenant of successful design firms that have striven for originality. This is based on the cultural attributes that stretching the mental capacity to achieve original thought results in a risk of an individual putting their career prospects on notice depending on how well their message is received. While a number of organizations outwardly declare that they encourage risk and experimentation, culturally individuals are not given the latitude to achieve that next level of original thought. Ahmed (2006) concluded that the most innovative companies of the future will be those which have created appropriate cultures and climates.

Directly linked to rewarding risk is the accompanying celebration of failure. While failure costs resources of time, effort, money, and reputation, it is also a catalyst for learning, growing, and developing as an organization. While learning from mistakes is not linear, it can provide context, perspective, and understanding for the next iteration that is truly valuable in reaching creative success. Unfortunately, cultural norms in many organizations result in failures being hidden and stigmatized, resulting in a second failure in terms of loss of knowledge (Edmondson, 2011).

Lastly, this brings about the question if it is even possible to teach and develop creativity in an individual. Research points that environmental conditions and leadership elements can help enable innovation, but there is still no resounding evidence that a person or organization can train a person to be creative. Toledo-Pereyra (2008) indicated that while it is still unknown if

this ability can be trained, there have been positive results in putting an individual through theoretical classroom sessions, studying contemporary books and articles on innovation, attending innovation-focused conferences, and writing a paper or developing a presentation focused on creativity (Toledo-Pereyra, 2008). While this is a formulaic approach to attempting to train creativity, there may be a missing the element of one-on-one mentorship, where a seasoned creative professional can demonstrate and guide an individual through the creative process that they use.

It is critical to emphasize not only office design, but also the organizational culture in fostering creativity. One area where this arises is during the mergers and acquisitions process. Infamously known for major change events, acquisitions bring not only the prospect of new possibilities but also fears as cultures shift, merge, and integrate. Zhao's (2009) study found that organizations that have been actively involved in an acquisition more often than not go through decreases in innovative creations before and after the acquisition. Many could speculate that these occasions create an environment where risk is not encouraged due to a greater loss of job security and the organization spending a significant amount of mental and physical capital on the change management efforts.

This finding on the negative effect of acquisitions on innovation runs counter to the main intent behind these acquisitions, as it is typically believed that they will help facilitate creation. What is more unique is that this model of acquiring companies aims to create a competitive advantage through the gaining of patented and privately held knowledge. Additionally, another variable is the removal of economic barriers for smaller organizations and global organizations. As there has been a trend of deregulation and an ability to use global resources, an uptick in creative solutions has been seen by organizations as business analysts design solutions around

requirements to operate legally and optimally. This has also led to the shrinking of product lifecycle times as research and design costs have increased, also increasing the pressure to produce ideas in a shorter amount of time. With this pressure, there is an association of risk management, and when heavy requirements are combined with significant economic and time pressures, the risk management application can easily become too much for a single organization to manage alongside the management of their innovative products, creating a new model of risk management outsourcing (Linnarsson, 2005).

This brings about the thought of how an organization would evaluate innovation during the acquisition process and how this could be evaluated outside of the acquisition process. Weeks and Thompson (2011) noted that when first assessing the innovativeness of an organization, the first key is to truly evaluate its product outcomes in the scope of the lifecycle model. This hits on a number of areas, starting with whether the products created are truly innovative, unique, and different from what the competition is producing. Then, it is important to methodically map the product process, from research and design to the customer receiving the product. In this lifecycle, an evaluator will be able to assess the infrastructure, methods, culture, and product process.

One concern within and outside of an acquisition is the level of resources that an organization is willing to commit to innovation. While an acquisition may see those resources increase or decrease, it is still significantly more per capita spent on innovation or research and design than a smaller company. Gayadeen and Phillip's (2014) did, however, find that smaller companies can compete with mega organizations using government grants to supplement their research and design resources. Yet, political scenery changes in the environment can also decimate an organization; the sudden cut of grant funding can transform a company (Gayadeen

& Phillips, 2014). Weeks and Thompson's (2011) research supplemented these thoughts on the necessity of resources. There is a high value in considering the outsourcing of numerous functional units, including human resources, so as to make enough resources available to apply toward research and development (Weeks & Thompson, 2011). This begs the question of what does the product-based organization look like in the future and will it resemble an entire focus on innovation and the outsourcing of all process-based work to third-party vendors.

Team Creative Process

Some discoveries have identified that an individual does not develop a mental image and then apply content or functionality of what that image can do, but rather that both these processes combine, where ideation allows for the imagination of a functional framework. Typically, this is aligned with a scaffolding technique, which fosters transforming and upgrading current items using them as a launching pad for new inventions (Wiltsher, 2012). This follows the process of how individuals actually create. Does this happen during team collaboration meetings—staring at a dimly lit desk, walking in the park—or can this process of creation happen anywhere, at any time, similar to a lightning strike? Csikszentmihalyi's (1996) study of mental flow identified that the ability to control one's mental attention to complete focus leads to the successful achievement of innovative work.

An old philosophy for organizing work around teams reappears during design research, as it is believed that in a team-based environment, people are more apt to think outside of the box and that the team is more equipped to find solutions that would not come from a single individual (Wolcott & Eadie, 2012). This falls in line with Guhl's (2015) study proclaiming that employees desire social connectivity during collaboration and that creativity is grown from casual, innovative conversations that have a higher likelihood of occurring in an ecosystem

designed to facilitate such interactions. Hence the presence of cafes, foosball, and ping pong in numerous workspaces; it is believed that these external mechanisms will help feed the dialogue of design (Guhl, 2015).

Taking the next step from internal teaming to external teaming, open collaboration allows ventures to create value, exchange and use others' work, work with unstructured coordination, and allow anyone to use their knowledge trust. Ideal examples of this model are the Apache source code or Wikipedia, where the domain knowledge has been open-sourced without restriction (Levine, 2014). Dougherty and Dunne's (2011) prospectus in 2011 takes this even further with the belief that products and services are so integrated into the fabric of society that they have become not only too complex for an individual to handle, but also too complex for a single organization to manage. This truly hit a breakthrough that resonates with the globally interconnected market: "However, the existing organizing structure in these ecologies stifles emergence and precludes much innovation, simply because theory and practice do not adequately address how to organize for complex innovation" (Dougherty & Dunne, 2011, p. 1214). While the focus of this study is not to evaluate the merits of open-sourced innovation, this does open the avenue to explore virtual work environments and how they elicit creativity. Some suggest that the innovative individual is entirely virtual with on-demand resources to support their endeavors (Bortolot, 2014a). In addition, Elerud-Tryde and Hooge (2014) found that virtual idea campaigns elicit creativity in large firms by facilitating innovative thought and engaging the entire workforce.

One of the greatest benefits of group collaboration is the added capability of scaffolding ideas upon each other. Initiated in educational settings, scaffolding involves building knowledge upon the foundation of prior knowledge. A similar model can be used in the creativity process

whereby a group of individuals enters with a common foundational knowledge and builds upon this knowledge using the ideas of the group to further their own connected levels of information and ideas (Lee, Kolodner, & Goel, 2011). A realistic example of this on a macro level is the evolution of cellular telephones and the progression from the 9-pound Motorola phone to clamshell phones to smartphones. Each iteration built upon the previous model instead of starting from scratch, which helped to expedite the technology advancement in a shortened time period.

Sosa (2011) found that weak and strong relationships between concepts both foster creativity. While the weak relationship leads the mind to attempt to fill in the gaps, the strong relationship leads to greater conflict, triggering disruptive innovation. This drives the counterintuitiveness of the teaming model of forming, storming, norming, and performing; that is, as group cohesion grows, it can become detrimental to the creative idea generation process (Sosa, 2011).

However, studies have shown that even the physical placement of believed innovation-inducing games in the workplace will not be effective if the right political system is not in place, resulting in essentially wasted effort. Pointing to a number of areas built around social interaction, leadership that highly discourages time spent away from work areas due to decreased productivity, deemphasizes a social culture. Culture and norms thus have a greater influence over the physical environment (Rosen, Ferris, Brown, Chen, & Yan, 2014). Tsai, Liou, Hsiano, and Cheng's (2013) study on innovation countered most supporters of social interaction as a means to creation with their finding that "individual characteristics had a direct relationship to innovative outcome, whereas neither worksite support nor creativity was correlated with innovative outcome" (p. 2648).

One large foundational construct of creativity is ambiguity. Ambiguity acts as the transitional state from the known to the unknown to the new known, which is where the true innovation resides. From an individual standpoint, people can exhibit behaviors that are either pro or negative to thought ambiguity, which can directly lead to a lack of enablement of creative thought. This can be easily stereotyped as fear of stretching one's thoughts outside of one's comfort zone, or as dreamers that cannot bring their thoughts into a practical reality. Both extremes can be detrimental, but Steffen Keck's (2014) discovered that a team-based model can better adapt to an ambiguous situation and therefore help individuals uncomfortable with ambiguity stretch to be at greater at ease when surrounded by a team; individuals more comfortable with extreme ambiguity can become more practical by following the social norms of the team (Keck, 2014).

Muhammad and Iqbal's (2000) research into language and creativity points out that there are similarities between linguistics and creativity in the brain that are coded at birth, thus implying that creativity is a natural given talent. Previously, Beckman and Barry's (2007) study on embedding learning design found that successful creation requires individuals with a high capacity for ambiguity paired with individuals with a lower tolerance for handling ambiguity. This directly points out that teams looking to drive higher innovation should be comprised of polar opposites in terms of being able to work with ambiguity.

Another diagnostic of innovation that has been identified is the age demographic in the organization. Researchers have found that increases in the number of employees in the early 20-year-old age group has resulted in 1 to 2% increase in the rate of new entrepreneurial firms based on new innovations. A number of implications and assumptions can be based on this finding. For instance, younger-aged workers may be more adept at innovative and creative thought,

which later diminishes with adherence to corporate norms; younger-aged workers may also have less financial responsibilities and commitment and therefore may be more able to join in on riskier entrepreneurial ventures (Ouimet & Zarutskie, 2014).

One of the repeatedly identified concepts crucial to team or organizational creativity is having a high level of diversity. This diversity can range from skill sets and subject matter expertise to nationality and race. The key emphasis being that greater innovation can be obtained through merging the thoughts of people with vastly different backgrounds and perspectives. This theory is believed to hold true as long as everyone with their different backgrounds is able to freely voice their thoughts and opinions without a fear of reprisal or subtle retribution. Scott's (2014) research carried this belief further emphasizing that individuals with natural differences—behaviors, specialties, and domain knowledge—have the capability to meld together, accepting and respecting others' opinions and shaping a true 360-degree perspective.

Saemundsson and Candi (2013) held a complimentary belief, finding that teams with diverse backgrounds were more adept at adopting new creative strategies and tactics into the behavior and culture. They also found that homogeneous teams showed a preference to resist change and to revert back to the previously held innovation strategy (Saemundsson & Candi, 2013). While this also has major change management implications, it really brings to light the concerns of a nondiverse organization being able to deviate and alter strategies when the market dictates it. The significance here is based on being able to diagnose and correct an organizational team makeup issue to ensure that they are able to remain competitive in agile and dynamic environmental market conditions.

Team Conditions for Innovation

One key to being able to align with the market dynamics and agility needed to adjust is the attribute of being open to experience. Some classify openness to experience as individuals' ability to examine their own experiences, allowing them to be affected by external and internal influences (i.e., taking in new information to process what the world has to offer). Studies have found a direct correlation between openness to experience and willingness to try more different and varied activities, which is associated with thinking more creatively (Mohan, 2013).

Associated with openness to experience is an additional characteristic: maintaining a tolerance for ambiguity. Described as an ability to mentally handle ambiguous stimuli and information as a data point versus as a threat that must be structured or organized. Tegano's (1990) study found that this ability to tolerate ambiguity had a direct correlation with an individual's level of creativity. It could be speculated that being able to incorporate ambiguous stimuli creates a cognitive network that can then be tapped into, as it makes additional connections that would have been previously missed if there was a lack of ability to accept that data point.

Stokes's (2011) research found that constraint-based models of innovation are paralleled with direct problem-solving. While constraints limit mental acumen to solution-based creativity, this establishes an iterative process of test, apply, reflect, and scaffolding of ideas, as the mind seeks to solve the problem or create a solution. While this binds the process, it can also lead to expansive creation (Stokes, 2011). Yeats and Yeats's (2007) research on building a creativity model brings forth a linear model to yielding a systematic creativity process. First, establish a problem statement to bind the process, develop a technique to address the problem, and begin the change management process. The process initiates with story writing to initiate a response to the

problem statement. Second, the goal is to build the problem through rich pictures using ink, finger paints, or even clay, as this will help predispose the team to unconventional thought. Next, the group moves through multiple redefinitions by looking at the problem through multiple why questions to uncover all of the perspectives and backgrounds to the problem. Then, adjust to a fishbone diagram to develop a balanced view; this will also uncover the root cause of the problem. Next, the team will go through role-taking exercises to stimulate the frontal lobe and to develop a higher level of empathy. This concludes with the creation of the resolution after the mind has been sufficiently prepared and conditioned to develop a solution or creation using all of the mental key areas that are needed (Yeats & Yeats, 2007).

One significant complaint from lead engineers and project managers is that the level of constraints and bureaucratic red tape that they encounter is now the largest portion of their job responsibilities. This has led them away from managing the day-to-day execution and innovative problem solving to trying to navigate the new system of regulations, environmentalism, and policy management. This, however, has led to a new application of mega project management, where a reframing of the constraints leads a number of project managers to the belief that they are the lead innovators in their fields because they are asked on a daily basis to find creative solutions to new problems where a simple template or tested solution will not work. There is a new level of customization to comply with new requirements, which has brought about a new level of innovation—moving away from a standardized manufacturing process application to project management (Whitbread & Greene, 2016).

Disruption is identified a number of times throughout literature as a catalyst for innovation; also included in that list is regulation. As rules and requirements have changed over the course of the political landscape, it is also of note that business as usual in the 1950s is

significantly different in the 2010s. With this evolution, productivity and efficiencies have become narrowed and tightened due to regulations ranging from environmental aspects to worker safety restrictions. Some organizations have looked on this as a deterrent and have focused on narrowly following the guidelines or acceptance of the penalties for noncompliance. Yet, the truly innovative organizations have used regulations as a catalyst to spur innovation, creating new and inventive solutions to follow the guidelines and naturally advance the progression of the new economy (Hartshorn, 2005).

Disruptive innovation is a term that has gone through a number of alterations and tends to vary from person to person as to what the true definition is. Typically, it is agreed upon that disruptive innovation results in a cheaper price point for the customer, greater accessibility for the global society either through usability or distribution, and a unique cost advantage over the existing market solutions—in essence, moving from the red ocean to the blue ocean of new opportunities and little competition. One new revelation of achieving this disruptive innovation is the use of big data to understand the trends and behavioral patterns of society. The ability to parse this data and extrapolate trends and behavior models has fostered innovation. For example, 23andMe has been mapping DNA for pharmaceutical companies, Fitbit has a gamifying exercise with friends, and Netflix captures entertainment consumption to be better able to create content more structured to the needs of the customer (Wessel, 2016). Big data may be on the precipice of being able to identify and initiate the next innovations based on the patterns of mankind's previous behaviors.

While technology adds great value to productivity and the potential for easy access to innovative collaboration, it is key to understand that a very important piece of the innovative process is a disruption—disruption to the typical routine, the standard thought processes, and the

typical day. Olson's (2015) research pointed to the hours and minutes spent interacting with coworkers at the water cooler and café can be the most innovation productive events of the day. Yet, Olson also noted that these disruptions can also be some of the greatest obstacles due to the breaking of flow and disjointedness of thought processes. This does tie disruption back to being a process of creation through social interaction, where creativity is a collaboration of problem-solving by sharing resources of technology, subject matter experts, and funding. In addition, while building creative disruptions, an individual will reframe reality by incorporating other members' perspectives, ultimately leading to novel invention (Hargadon & Bechky, 2006).

Disruption is one of the key tenets of Tim Brown, who along with his associates at IDEO, developed the foundation of design thinking for problem solving. They begin their process with empathy and focus their initial efforts on understanding the people at the center of the design challenge, looking for how to meet their emotional and physical needs and to understand the target perspective on how they view the world. The following step is to achieve definition or bring clarity to the situation, allowing them to document a compelling problem statement in which everyone will be able to understand the issue. The third phase is defined as *ideate*, where the focus is placed on mass idea generation, the goal of which is to create as many ideas and solutions as possible to feed the prototyping phase, where the select few ideas that were identified are put into an actionable form. This builds a simple three-dimensional model of what the idea looks like in reality and how applicable it is to the problem and solution. Lastly, test mode becomes the final phase as the idea and prototype are incorporated into the recipient interaction space to judge the effectiveness of the concept (Institute of Design at Stanford, n.d.).

Physical Creative Environment

From understanding the need for innovation to the process of creating the next step, it is critical to understand environments of innovation and whether an environment can enable the creative process. Recent studies have found that organizations that outwardly support creativity introduce more new products and enjoy more new product successes than organizations that do not emphasize innovation (Dul & Ceylan, 2014). Further, studies have revealed that workplace diversity and support were complementary aspects to creative ideas; in addition, it was found that strong relationship ties acted as conduits of social cohesion, which was an overall catalyst to design (Sosa, 2011). Interestingly, aligned with supportive environments and social interaction, there was also a link between office design and health, well-being, creativity, and productivity ("Office Design Affects Health," 2015).

Narrowing the focus to office design, a number of industry experts claim that a space that fosters transparency and a variety of choices to how and where to work creates an environment that imitates life outside of work and drives design thought (Bortolot, 2014b). Elsbach and Bechky (2007) proclaimed that to truly maximize the potential of office design, it is imperative to have easy access to information and to have aesthetic functions that tie back to previous successes. Other experts proclaim that using the Lean methodology of 5S to clear out office space establishes routines for clearing the room for cognitive thought time; it creates spaces for explorative innovation. The thought is that these spaces bring a culture of actions and thinking outside of routine issues (Schaeffer, 2014).

Interestingly, Wabler, Magnolfi, and Lindsay (2014) found that there is no evidence to support that open spaces with clean and contemporary aesthetics promote innovation. Through the use of sensor technology, the team was able to monitor communications, movement, and

performance. Their findings uncovered that the movement that was needed for transparency of thought and communications was virtual and electronic; they identified that more effort should be placed on the electronic design of an organization's databases and virtual interfaces than on the office itself (Wabler et al., 2014).

Putting more focus back onto the organizational ecosystem in which the individual and team operate, the physical office space is believed to truly offer three types of functions for creativity: functional, psychosocial, and inspirational (Hoff & Öberg, 2015). This has led to many organizations setting up office spaces where the staff are forced to walk around more with the hopes of bumping into other staff members and creating innovative connections, similar to the nuclear fusion process (Peters, 2015). This has led to a number of companies, specifically in Silicon Valley, creating business campus environments that intentionally bring workers together through a plethora of extracurricular activities (Oleksuk, 1991). Naturally, this has led to a number of renovation projects, transforming tired and worn-down facilities into vibrant new office spaces, as exemplified by the gentrification that has taken place in Baltimore, Maryland and Brooklyn, New York (Mirel, 2015).

Some experts point out that an equal balance of open areas and private areas creates a dynamic flow of creative information ("Branding Business Going Creative," 2014). While other experts proclaim that the most successful innovative ecosystems provide a variety of work spaces, allowing people the freedom to choose the best place to get their job done (Ward, 2015). Create these types of offices can be highly expensive, and what is believed to be innovative-inducing today may be something very different 2 years from now (Galvin, 2000). Chen (2015) in 2015 astutely pointed out that "this makes the dialectical process of creative synthesis

contingent on the surrounding environment, further solidifying its connection to evolution" (p. 461).

Placing the focus on the physical location, Bortolot's (2014a) study found that the biggest issue for workers was that their work environment had no resemblance to their life and that there was a difficulty in being able to accurately measure the differences between an uninspiring and inspiring office space due to an inability to measure this effect. Sykes's (2015) study of architecture emphasized the importance of the lobby design; the lobby sets the tone for the entire office. Thus, a lion's share of office design effort should be focused on the entrance. Subsequently, the office entrance design is predicated on a reciprocal system of technology, process, product, and business, all complementing each other in a profitable endeavor. The design is key to enabling these interdependencies and linking departmental successes, creating a level of transparency and cooperation (Gupta, 2007). But, it is unclear if an open floor design creates that ecosystem. Some experts believe that an open floor plan can encourage or discourage casual conversations, depending on the personalities at play. While space may or may not have an effect, studies show that innovation is based on the balance of three dimensions: proximity, privacy, and permission (Fayard & Weeks, 2011). Andruss (2015) continued that thought that different spaces are needed for different work functions, even while it is believed that open spaces create social interactions that are believed to improve creativity. Clearly, social serve as a catalyst to innovation; isolating people in offices is counterproductive to that goal. There are, nonetheless, some tasks that require undistracted and focused attention for which an open office space would clearly not be indicated.

There is a current belief that innovation is generated by having serendipitous encounters around the organization—having people who do not usually interact with one another interact

and make new connections that would previously have gone unrealized. For example, SAB Brewing was keen to have a bar at their headquarters to facilitate these encounters between brewers and business managers and Apple Inc. has gone to significant efforts to build its headquarters in a circular fashion attempting to connect engineers with sales (Ohr, 2013). While it has been shown that these encounters do elicit greater creativity, much of the effort has been placed on making this accidental instead of purposeful through designed interactions.

Lee's (2015) study goes as far to state that "workgroups no longer need to be in the same space to be productive. That means everybody has access to amazing tools and can work from anywhere" (p. 54). This statement relies heavily on the supporting infrastructure, which will enable this by putting in place direct and indirect channels to enhance communication and collaboration. By building this structure, a team can contribute to their innovations and creations, but without these communication channels, it is not feasible to expect significant results in a virtual environment (Bassanino, Fernando, & Wu, 2014). This transformation is believed to be more important than the redesign of a physical office location; it is more beneficial to place the effort on the emergence of a digital platform, which will be the central focus of the organization where all employees must pass through electronically (Yoo, 2012).

With any implementation of new technologies, though, be wary not to implement the technology without the adequate change management process set in place. Very typically, employees are granted rights to a new software platform with the expectation to drive growth without the understanding of how to properly operate the technology. This drives high levels of frustration, discontent, and a predisposition to not use the technology out of spite (Stratton, 2013).

Facilitation

A relatively new term in the lexicon of corporate cultures is facilitation. In acts of stimulation, guiding, or coaching, or enabling, facilitation has become a powerful tool in gaining a competitive edge by getting the most out of people. Originally brought into meeting structures in a corporate environment, the main role of facilitation was to ensure the flow and management of meetings. Facilitators played the role of neutral participants only focused on the process and not the outcome. This has blossomed into a new set of values including designing events, structures, experiences, and processes that enable prime performance from participants (Brookfield, 1991).

While facilitation is ideally known as paving the way for an easier attainment of an object, insight, or concept, it also can also create a level of motivation within participants. Lin (2007) studied motivation in knowledge sharing among employees. In the study, Lin saw positive rewards not only with individuals in the facilitator role (i.e., taking extra efforts to share information), but also in that of participants, who shared knowledge with other participants to maintain a continuity of the process (Lin, 2007).

One belief is that prototyping helps enable the cognitive process of creativity by scaffolding ideas; yet, a relatively new finding claims that prototyping models may actually inhibit the creative process. Paul Leonardi's research of the car industry found that prototyping in the car industry early in the creative process has led to a cognitive roadblock, as it eliminates the needed ambiguity that leads to breakthrough innovation (Ennes, 2016). This implies that the previous model of scaffolding creative thought based off of small incremental innovative thoughts is good for small improvements but can eliminate the potential for revolutionary inventions. This also poses the thought that there are two separate camps of how to create and

could possibly be the dichotomy of small and steady innovative gains versus varied and infrequent, massive innovative gains that revolutionize the market.

Literature Review-Determined Best Practices for Environmental Factors

The review of literature revealed the following 42 best practices.

- Applying Constraints: While numerous legends have grown about the levels of freedom and autonomy in organizations needed to foster innovative leaders, Caniëls and Rietzschel (2013) found that constraints positively impact innovation. These constraints are believed to lead to another dynamic in thinking by incorporating additional challenges into the scope of the effort. This brings about an additional challenge to the individual or group tasked with being innovative, thus spurring greater creativity.
- Applying Vision and Objectives: In a blending of leadership and innovation, the work of *Leader to Leader* (Hesselbein & Cohen, 1999) dissected the intersection of strategic leadership and innovation. In this work, Hesselbein and Cohen (1999) determined that applying vision, strategic goals, and objectives provide two key facets of the innovation process. The first is that it sets a tangible target for people to strive for while having a vague direction to guide them. The second aspect is the effectiveness of an innovative idea, which predicated on the organization's ability to execute the said idea by establishing and sharing a vision to the organization, ultimately helping to align the internal resources needed to bring the idea to fruition (Hesselbein & Cohen, 1999).
- Challenging Culture: In 2008, Dobni found that cultures which produced challenges to the workforce were found to be more innovative. He identified that an organizational culture is a lynchpin to innovation and that a healthy challenge for innovation is a

defining aspect of a culture (Dobni, 2008). This *culture of challenge* can be found in relation to constraints and continuous learning in the theme of overcoming obstacles.

- Connecting Unrelated Ideas: Smith's (2003) work on group creativity and brainstorming found that when together, groups of individuals revert to "typical thinking" (i.e., taking the same approach to a problem). They rely on "implicit assumptions," automatically jumping to a cause, and "recent experience" (i.e., overrelying on historical experiences). He also noted that in a diverse group guided through the brainstorming process, the group had the ability to connect unrelated ideas and concepts together to manufacture new and innovative thoughts. Smith noted that greater blending of ideas typically led to more novel ideas.
- Continuously Learning: Bessant and Caffyn's (1997) work on continuous improvement environments found that organizations that had active improvement cultures were not only better prepared to conform to a dynamic marketplace but were also more innovative. This was attributed to an organizational need for continuous learning, as strategies, actions, and roles were in a constant state of flux. In this flux, individuals who were able to continuously learn new employment facets and had the desire to continuously improve their conditions were more likely to be successful and were more innovate (Bessant & Caffyn, 1997).
- Employing Temporal Landmarks: Previously mentioned was Dai et al.'s (2014) work on temporal landmarks and the starting of new initiatives at the start of years, months, or weeks. Further extending that thought process is the research conducted on cognitive stimulation and interference. One of the major takeaways is that for individuals to move

forward with their creative self, they need to make a mental separation from their past history to be able to create anew (Nijstad, Diehl, & Strobe, 2003).

- Feeling Safe and Secure: Organizational fear and perceived repercussions are noted in a number of studies. Stein (1974) was one of the first to write about the conditions for innovative success. In these conditions, he identified that individuals need to feel safe and secure. They also should not feel pressured or threatened, but more preferably relaxed and alert (Stein, 1974). This has a direct tie to Maslow's (1987) hierarchy of needs, where before an individual can achieve their peak performance, they need to have their physiological and safety needs met.
- Rewarding of Risk Taking: In the "Is the Social Psychology of Creativity Really Social," Hennessey (2003) reiterates the detriments of intrinsic motivation. These consist of expected reward, expected evaluation, surveillance, time limits, and competition (Hennessey, 2003). Key to this is not the rewarding of the outcome but the rewarding of individuals taking risks. Through this mechanism, individuals will take greater social risks, which will inherently lead to more creative ideas.
- Scaffolding Ideas: Jerome Bruner and Lev Vygotsky were some of the early educational pioneers who theorized that learning was a facilitated event that was built upon a foundation and new levels of knowledge (Vygotsky, 1994). Finke et al.'s (1992) creative cognition model holds the same conceptual design that ideas begin with a foundation and are built upon in a scaffolding manner. This scaffolding implies that ideas are not conjured out of thin air, but rather they are supported by each other to identify something new and novel.

Literature Review-Determined Best Practices for Process Designs

- Achieving Deep, Focused Thought: One of the recurring themes is achieving deep thought. A key focus of Csikszentmihalyi's (1990) work is on achieving a state of flow for optimal creativity production, and Nijstad et al. (2003) reinforced this with their work on interference. They noted that while group performance actually hinders creative performance, deep thought is an absolute for creativity; it is necessary to eliminate added interference so that individuals may be able to achieve a higher level of deep thought, ultimately inducing innovation.
- Applying Innovation Activities: In *The Neuroscience of Creativity*, Vartanian (2013) explored a number of areas of what happens to the mind during the creative process. Vartanian concluded that through training, individuals could become more adept at being creative. Some of these training events include mental stretching and ambiguity enablement. By placing individuals through activities and exercises where their preconceived notions and thought processes were challenged, along with mental exploration through ambiguous concepts, participants were able to reach an advanced level of creative thought (Vartanian, 2013).
- Applying Multiple Perspectives: While innovation is noted for being optimal as an individual experience, the outcomes can be parochial in nature. The genesis of the group collaboration includes the infusion of multiple perspectives. By applying a variety of inputs, ideas can take different form and address solutions with greater assurances of achieving customer satisfaction (Milliken, 2003).
- Building Rich Descriptions and Writing Creatively: Stasser and Birchmeier (2003) evaluated group choice in creativity sessions. One of the major takeaways was a

collection of creativity-focused best practices. Included in this work was that individuals needed to read and write in solitary before discussing their ideas with a larger collection of people, and another way to activate more diverse thought within a person was to have them creatively write about the topic or to have them draw rich pictures. This approach forces the participants to view their idea from a different perspective (Stasser, 2003).

- Conducting Thought Experiments: While *thought experiments* were first documented in ancient Greece, they were made famous by Albert Einstein. A thought experiment is simply an experiment that is carried out in imagination. Rachael Cooper's (2005) work explored the technique in more depth, uncovering that thought experiments blend philosophy and science together and manipulate the individual's worldview from a "what is" to a "what if" point of view.
- Continuous Activity Participation: Fran Rees's (2005) documentation of facilitators' standards of excellence noted that an effective facilitator actively engages the entire group. This emphasizes the fact that the event leverages the knowledge and expertise of the entire population. With lengthy events, opportunities arise where individuals can deviate from the group and engage in other tasks or disengage from the event. Rees noted continuous activity is key to maintaining the population's interest and must be designed into the process to maintain levels of deep focus.
- Designing Around Culture: Referencing back to Tim Brown's work at IDEO and his creativity model of design thinking, we close on *user-designed experience*. Brown's model refers to this as the empathetic stage of understanding. During this phase, the creator conducts research on the future benefactor to understand what their issues are and

to empathize with them. This is under the belief that by being able to empathize, you will then be able to design the experience for them with greater success (Brown, 2008).

- Observing the Work: Made popular in the Toyota Production System and Lean methodology, the *Gemba walk*, has become a staple of the continuous improvement culture and now the innovation movement as well. This has been translated as seeing the work for oneself to thoroughly understand it (Liker, 2004). This method has been adopted by innovation design organizations to see situations first hand and to create solutions based on customer pain points; a quick way to discover a customer pain point is to see it while it occurs (Brown, 2008).
- Practicing Reverse Thinking: Another methodology centered on creativity and design thinking is *reverse thinking*. This is the practice of intentionally trying to identify the worst idea and outcome imaginable (Birsel, 2017). Upon determining this idea, the creator will then be able to reframe their thinking and achieve a different perspective. This adds to the application of using the concept of multiple perspectives and mass idea generation to root out an idea of higher quality.
- Producing a Quantity of Ideas: A current trend in the academic literature is that more ideas, or a mass of ideas, have a direct correlation to better ideas. This was also reinforced by Stein's (1974) work, which focused partially on the area where quantity breeds quality. This falls into the camp where individuals start their idea processes with the easy solutions or ideas that are close to the top of their mind, and the more ideas they have to produce, the greater the depth of creativity they will be forced to explore.
- Prototyping Conceptual Ideas: Tim Brown codified his creativity principles under the structure of design thinking. This has been a highly effective process in assisting

technology and other organizations in developing innovative solutions. Included in this process is the application of prototyping. The intent of the prototype is to develop a barebones, little to no-cost representation of the conceptual idea. This prototype then gives the creators a tangible product that can be thought about in a different manner, and thus the ability to enhance and refine the idea (Brown, 2008).

- Revisiting of Previous Ideas: During the innovation process, Stasser and Birchmeier noted that reflection plays a key role in the thought generation process. They asserted that greater innovation is derived from focused attention with built-in time gaps to revisit the ideas (Stasser, 2003). This is under the belief that these breaks in time help the mind readjust after fully processing the concept. This also falls in line with the Hélie and Sun's (2010) explicit–implicit interaction innovation model, where innovation is derived through repetitive mental processing.

Literature Review-Determined Best Practices for Group Innovation

- Achieving Cognitive Diversity and Assembling a Team with Diverse Backgrounds: Milliken (2003) focused on the intersection of diversity and innovation, reinforcing a commonly held academic belief that diversity promotes creativity and innovation. This adheres to the needs of creative process for interplay with convergent and divergent thought. *Cognitive diversity*, or different ways of thinking, provides the condition for convergent and divergent thought. Having a diversity of backgrounds enables a range of individual cultures within the team, creating opportunities for cognitive diversity (Milliken, 2003).
- Being Trusting, Vulnerable, and Playful: West's (2003) research into innovative work teams found a number of key characteristics associated with highly innovative production

teams. The first being vulnerability and the trust among the team to be able to express their thoughts and ideas without concerns about how they will be viewed. Associated with vulnerability is the team's level of playfulness and their willingness to have fun with one another, creating a joyful environment where people are not only comfortable with their teammates but happy to be among them (West, 2003).

- Debating of Ideas: One of the main concerns with a group or team brainstorming is the prevalence of groupthink, and how groupthink negatively impacts effectiveness, as the goal shifts from creating originality to achieving consensus. One of the main issues of achieving a majority view is that people naturally gravitate toward consensus, even if it is the wrong decision or choice. Nemeth and Brown (2003) found that the application of friction, debate, and dissent stimulates the thought process to help achieve multiple perspectives on an issue; the goal of a team should be achieving candid discussions (Nemeth, 2003).
- Enabling Mental Tolerance and Being Open to Experience: A recurring theme throughout the review of the literature is ambiguity and the group's mental tolerances to explore in these areas of depth. It is noted that while the safe and easier solutions are identified first, the solutions and ideas of higher relativity take depth to explore (Nijstad et al., 2003). During these explorations through an ambiguous thought process without a framework to ground thinkers, it is key for the team or individual to achieve mental tolerance, or the ability to accept ideas without rejecting them automatically. Associated with this is the participants' ability to be open to new experiences; this conscious decision opens the door to ambiguity.

- Rotating Team Members: An additional key point brought to light when looking at group creativity is the need for member rotation. While it is a skill and a refinement to build a cohesive team that has a safe environment to share freely, there also comes a point in time when the team has to introduce new members as the return on investment of multiple perspectives will diminish. This rotation has been observed to drive greater creative idea production (Argote, 2003).
- Starting as an Individual and Then as a Group: When starting the innovation process in a group setting, a number of researchers repeat the point of having teams think individually before moving into a larger group facilitation. The reasoning behind this is that among diverse team, some thinkers process information in a different manner, which cannot be accomplished by going straight into discussion. As groups do begin to form and dialogue is initiated, it is important to have team role play or act out future states to help conceptualize what they are attempting to solve or create (Stasser, 2003).
- Empathizing and Roleplaying Teams: Associated with the process of empathetic observation is team member empathy. While it is one aspect to be able to empathize with the client or customer for whom the problem is being solved, it is another to be able to empathize with the collective team members to build a higher level of trust and understanding with the cohort. This built-in trust and understanding accompanies a safe environment for the team to be able to speak openly, freely, and without hesitation, thus helping to spread their ideas instead of holding onto them (Stasser, 2003).

Literature Review-Determined Best Practices for Facilitator Behavior

- Achieving Cognitive Dissonance and Having Comfort with Ambiguity: Ree's (2005) documentation of facilitators' practices included the ability to achieve *cognitive*

dissonance, which is the ability to hold two opposing thoughts or beliefs in addition to being comfortable with managing ambiguity. The environment that they are trying to achieve of a diversity of thoughts that are not fully conceptualized often run counter to each other (Rees, 2005). As a facilitator's goal is to achieve neutrality, they must hold the thoughts with full acceptance so as to not unduly influence the group.

- Being Curious, Reversing Assumptions, and Garnering Trust: A complimentary key behavior of a facilitator is the attribution of being curious. While historically tied to the behaviors of great inventors, namely Leonardo da Vinci and Albert Einstein, there is a direct linkage to facilitators expressed behaviors of curiosity that leads to building an environment which gives the participants the permission to explore. This permission then enables their minds to discover new pathways and ideas. One methodology for accomplishing this is reversed assumptions, or attempting to believe the opposite of what you believe to be true. The glue that then holds these factors together reaches back to the environment that the facilitator has created, where the participants feel that they have no safety concerns or fears of repercussions from the statements that they make (Toledo-Pereyra, 2008).
- Establishing Expectations and Holding the Participants Accountable: One point continuously reinforced through the work of *Leader to Leader* (Hesselbein & Cohen, 1999) is the theme of establishing expectations. While this points the participants toward the general direction of travel, it also provides a guiding north star to help bring the team back to a centralized theme (Hesselbein & Cohen, 1999). The establishment of expectations also enables the ability for the facilitator to hold the group accountable.

This holding of accountability elicits an internal resolution in many participants to produce and leave the event with a tangible product (Stasser, 2003).

- Facilitating with Excitement and Being an Agile Learner: Brookfield's (1991) early look at facilitation identified two key attributes of facilitators. The first is engaged excitement when leading a facilitation. It is important to keep a high level of energy and focusing on discussions to be able to morph the event to where the participants drive the discussion too. The second attribute was having the ability to learn new topics quickly and with zest. Known in other circles as a love of learning or a *learning agility*, it represents the ability to pick up new topical areas to have a better insight into the discussions or events being led.

Literature Review Comprehensive Best Practices

Figure 2 presents the captured best practices based on the review of the literature.

Facilitating Innovative Thinking Best Practices Determined Through the Literature Review	
What environmental factors are beneficial to group innovation	**What process designs are beneficial to group innovation**
Applying of Constraints (Caniëls and Rietzschel, 2013)	Achieving Deep, Focused Thought (Csikszentmihalyi, 1990)
Applying Vision and Objectives (Hesselbein & Cohen, 1999)	Applying Innovation Activities (Vartanian, 2013)
Challenging Culture (Dobni, 2008)	Applying Multiple Perspectives (Milliken, 2003)
Connecting Unrelated Ideas (Smith, 2003)	Building Rich Descriptions (Stasser and Birchmeier, 2003)
Continuously Learning (Bessant and Caffyn, 1997)	Conducting Thought Experiments (Cooper, 2005)
Employing Temporal Landmarks (Nijstad, Diehl, & Strobe, 2003)	Continuous Activity Participation (Fran Rees, 2005)
Feeling Safe and Secure (Stein, 1974)	Designing Around Culture (Brown, 2008)
Rewarding of Risk Taking (Hennessey, 2003)	Observing the Work (Liker, 2004)
Scaffolding Ideas (Finke, Ward, & Smith,, 1992)	Practicing Reverse Thinking (Birsel, 2017)
	Producing a Quantity of Ideas (Stein, 1974)
	Prototyping Conceptual Ideas (Brown, 2008)
	Revisiting of Previous Ideas (Stasser, 2003)
	Writing Creatively (Stasser and Birchmeier, 2003)
What team dynamics are beneficial to group innovation	**What facilitator behaviors are beneficial to group innovation**
Achieving Cognitive Diversity (Milliken, 2003)	Achieving Cognitive Dissonance (Ree, 2005)
Assembling a Team With Diverse Backgrounds (Milliken, 2003)	Being an Agile Learner (Brookfield, 1991)
Being Open to Experience (Nijstad et al., 2003)	Being Curious (Toledo-Pereyra, 2008)
Being Playful (West, 2003)	Establishing Expectations (Hesselbein & Cohen, 1999)
Being Trusting (West, 2003)	Facilitating with Excitement (Brookfield, 1991)
Being Vulnerable (West, 2003)	Garnering Trust (Toledo-Pereyra, 2008)
Debating of Ideas (Nemeth, 2003)	Having Comfort with Ambiguity (Ree, 2005)
Enabling Mental Tolerance (Nijstad et al., 2003)	Holding the Participants Accountable (Stasser, 2003)
Rotating Team Members (Argote, 2003)	Reversing Assumptions (Toledo-Pereyra, 2008)
Starting as an Individual and Then as a Group (Stasser, 2003)	
Empathizing and Roleplaying Teams (Stasser, 2003)	

Figure 2. Literature review-determined best practices.

Chapter Summary

As evidenced by the literature, innovation and creativity have been studied thoroughly over the last 200 years. The trend increased as corporations and institutions realized the financial value that innovation created, and in turn tried to replicate those efforts. For, if there is an ability to spur innovation, there is a greater ability to develop new revenue streams, leading to the greater long-term health of an organization.

To date there is yet to be a formula in which innovation can be replicated on a consistent basis. Great efforts have produced insight into how the brain interacts during the spark of original thought, the conditions of why a person would want to create, and the best environments for spurring innovation. While there has been extensive research on the creative process and on the process of facilitation, little is known about the combining of both types of research. Formal facilitation of innovation is a relatively new concept which has been popularized over the last three decades. In the following chapter, these insights will be explored by developing a structure to understand if innovation can be facilitated and what are the practices used to accomplish this. Explained in detail will be the research process and methodology used to understand this phenomenon.

Chapter 3: Methodology

Chapter Overview

In this chapter, the researcher will explain in specific detail the methodology for conducting this research. Beginning with the research design, the methodology will be described, followed by defining the sample population and how human subjects were protected. Next, the instrumentation used in this study will be explained as well as how the data were collected, managed, and analyzed. The chapter will conclude with an overall summary.

Introduction

The purpose and overarching research question of this study was to determine the best practices exercised by facilitators to elicit greater innovation from a group of participants. This will be a key understanding for organizations aiming to stimulate innovation within their organization. Additionally, the study intended to determine how facilitators measure success and their recommendations for future facilitators. This study was guided by four related research questions:

- What environmental factors are beneficial and counterproductive to group innovation?
- What process designs are beneficial and counterproductive to group innovation?
- What team dynamics are beneficial and counterproductive to group innovation?
- What facilitator behaviors are beneficial and counterproductive to group innovation?

Research Design

The intent of this study was to determine the best practices applied by facilitators to elicit innovation and to understand how these facilitators measure the success of the events they facilitate. These findings will contribute to the overall study of innovation, team dynamics, event design, and the behaviors of facilitators that enable innovation. This study aimed to

interpret participants' experiences and best practices using a qualitative approach, applying a constructivist epistemology and an interpretivist paradigm. The methodology was phenomenological and utilized interviews.

The researcher approached this study through the interview process capturing the insights of facilitators of innovative thinking. There is a relatively small population of facilitators, so the snowball sampling methodology was applied, whereby the first participant was asked to identify an additional facilitator who would be willing to share their insight. Human subject considerations were taken in full as this research initially went through a preliminary peer review for appropriateness, a review by the dissertation committee board, and by the Pepperdine Institutional Review Board (IRB). This chapter discusses the research methodologies that were employed to accomplish the study's purpose and to answer the proposed research questions.

The study was a determination of best practices applied by facilitators of innovative thinking —a descriptive study that employed a qualitative approach. The research questions were explored using an open-interview format with approximately 15 participants who are considered experts in their field of facilitating innovation. It was assumed that this approach would work well, as the intent of the study was not to quantitatively validate the effectiveness of a strategy, but rather to create a rich description of how this process works while examining the intersecting dynamics. The interviews were consistent with Patton's (2002) postulation of the open-ended question and designed to prompt an in-depth response to add to that narrative.

This consisted of a semi-structured interview in a one-on-one format so as to not create an intimidating environment, with the goal of establishing a comfortable setting to enable a free flow of dialogue. This qualitative approach and phenomenological study identified the best practices around what environmental factors are beneficial and counterproductive to group

innovation, what process design factors are beneficial and counterproductive to group innovation, what team dynamics are beneficial and counterproductive to group innovation, and what facilitative behaviors are beneficial and counterproductive to group innovation.

This study was a descriptive study that used a qualitative approach with the intent of collecting best practices of individuals who facilitate innovation workshops; additionally, it aimed to identify how these facilitators measure the effectiveness of the events they facilitate. The epistemology was constructive in nature with an interpretist paradigm, and the methodology to conduct this research was phenomenological, applying interviews to uncover the topical phenomenon. *Phenomenology* focuses on the foundation of consciousness from the first-person point of view ("Phenomenology," 2017). It was built upon the foundations of Immanuel Kant (2015), who theorized that there was more to reality than actual objects and that our application of reason gives meaning to said objects. Phenomenology is defined conceptionally as the study of structures of experience or consciousness; it is the study of phenomena, the appearance of objects, experiences, and the meaning placed upon these phenomena. This study followed Clark Moustakas's (1994) model of psychological phenomenology, where the study aims to understand the participants' interpretations of the phenomenon, not the researchers'.

In this study, audio interviews were transcribed prior to analysis. Transcripts were translated into categorized phrases, which were mined to identify specific code words that provided a descriptive summary of how the participants rationalized a given phenomenon. During this *horizontalization* process, coding was used to convert elements into themes. The key to this process was the documentation of the interviewee's background situation, which included the environment and the participant's experience, to determine the level of influence.

Creswell (2014) identified the importance of capturing the textual and structural description, as these descriptions create the essence of the phenomenon, called the essential, invariant structure. This leads to codifying the experience in which participants are better able to define their phenomenological experience. With that definition, Polkinghorne (1989) identified that is essential for the reader to understand the phenomenon to a greater extent.

Data were collected through semi-structured interviews with 15 participants; saturation occurred during the process. Individual participants were identified through a snowball sampling approach whereby each participant was asked to introduce another individual who met the inclusion criteria for participation. The data sources for this research were selected with consideration of the population. Participants were selected by meeting the inclusion criteria, and then via snowball sampling within the subpopulation. The study adhered to the standards for human subjects research established by Pepperdine University's Institutional Review Board (IRB).

Setting and Sample

The researcher utilized a snowball sampling methodology to recruit participants. The sample was drawn from a variety of professional facilitation associations. The demographics of the population varied in terms of age, language, religion, nationality (or ethnicity/race), citizenship, socioeconomic status, educational status, and marital status. Participants had different facilitation specialties, and it was speculated that a minimum of 25% of the members had routinely facilitated an innovation or ideation workshop. Participants must have met the following criteria to qualify for participation in this study: (a) facilitation of an innovation-dedicated event, and (b) facilitation of an event considered as successful and facilitation of an event considered a failure.

Participants were selected using the snowball or chain sampling. Snowball sampling is a method that "yields a study sample through referrals made among people who share or know of others who possess some characteristics that are of research interest" (Biernacki & Waldorf, 1981, p. 141). Also known as referral sampling, snowball sampling begins with one participant who refers other participants, who then may refer additional individuals, thus creating a chain of referrals (Lindof & Taylor, 2011). With each referral, the sample population grows over time into a snowball. The snowball sampling method is best suited for hard-to-recruit populations (Lindof & Taylor, 2011). Therefore, the snowball sampling method was an appropriate technique to reach a very limited population of facilitators of innovative thinking.

Although snowball sampling is a widely used technique by researchers, there are inherent limitations with this methodology. According to Biernacki & Waldorf (1981) there are five disadvantages to the snowball sampling method:

> 1) finding respondents and starting referral chains; 2) verifying the eligibility of potential respondents; 3) engaging respondents as informal research assistants; 4) controlling the types of chains and the number of cases in any chain; and 5) pacing and monitoring referral chains and data quality. (p. 144)

For this study, the researcher minimized potential disadvantages associated with the snowball sampling method by utilizing the LinkedIn International Association of Facilitators forum group database to assist in locating the first participant. According to Lindof and Taylor (2011), locating the first participant can be time-consuming and difficult due to the nature of this being a difficult-to-recruit population. Furthermore, the referral chain could be disrupted if the first participant distrusts the researcher or the process. However, the researcher avoided

potential limitations by monitoring the sampling process and establishing relationships based on trust to create a safe environment that facilitated storytelling.

The process of first selection occurred with a written post to the open forum identifying the research topic, the impact of the study, and a call for participants. Included in that message was the inclusion criteria mentioned earlier. Following the attainment of the first participant, additional participants were propositioned via e-mail or phone call, with a follow-up request of two times when a response was not garnered. Approximately 15 participants were expected to sufficiently identify the descriptive narrative for the research. The studies followed the guidelines presented by Creswell (2014) on achieving saturation, where no new information was being acquired during the interview process during the 15th interview.

Human Subject Considerations

This research was conducted in a manner consistent with Title 45, Part 46 of the U.S. Code of Federal Regulations, Pepperdine's IRB, and the ethical principles of the *Belmont Report*. Data collection was done at multiple sites that were independent of a specific industry. An individual consent form was shared with each participant in the study. A detailed application was submitted to the Pepperdine University Graduate and Professional School IRB, including the IRB application Informed Consent Form and Interview Protocol for the study.

Participation in the study was voluntary. Individual identifying information was removed from any retained transcripts. Participant rights included:

> the right to be fully informed about the study's purpose and about the involvement and time required for participation, (b) the right to confidentiality and anonymity, (c) the right to ask questions to the investigator, (d) the right to refuse to participate without any

> negative ramifications, (e) the right to refuse to answer any questions, and (f) the right to withdraw from the study at any time. (Richards & Morse, 2013, p. 263)

Participants were ensured confidentiality, verbally and in writing, and informed consent forms were secured. Beyond a written thank you and a copy of the completed research, no additional remuneration was given.

A number of different risks, benefits, and mitigations to participants were considered. The most significant benefit of participation in this study was that participants would obtain a copy of the findings, which could potentially positively affect their performance in their current role or in the preparation for future roles. By sharing common practices and challenges in innovation facilitation, it was expected that participants would learn how other facilitators practice and could compare and contrast how their styles, strategies, and practices. Subjects may have feared that participation would have an impact on their company reputation by divulging trade secrets. It was stated explicitly that there would be no negative ramifications for participation, nor would any trade secrets be published. All data were maintained by the researcher in a locked safe during the period of the study and once the study is complete, all data with personally identifiable information will be destroyed. Demographic data were gathered, but they were stripped of identifiable characteristics and reviewed in aggregate. The lead researcher was responsible for ensuring that these commitments to maintain confidentiality were upheld; if there was a breach of confidentiality, the researcher would have immediately notified the IRB as well as the affected parties to mitigate any detrimental actions that could have occurred due to the breach. Upon completion and publishing of the study, the transcripts and completed work will be sent to the participants for review. The commitments are further outlined by Pepperdine's IRB.

Instrumentation

The following is a summation of the proposed interview protocol for the study, which was reviewed by the preliminary review committee and then finalized by the dissertation committee. Because the protocol was designed for a specific one-time use, traditional methods of establishing the reliability of a data collection instrument were not applicable. Data were collected from participants over a 2-week period utilizing the qualitative methodology, conducted via interviews. The data-gathering instrument was a set of 12 open-ended items that helped to answer the four research questions. As opposed to leveraging an existing or previously used instrument, the data collection instrument was created by the researcher. Developing a new instrument was important because the questions that needed to be addressed in the data gathering process were specific to facilitators of innovative thinking. The responses gathered may help to identify facilitation strategies and practices related to successful facilitators of innovative thinking. The instrument located below and in Appendix E includes a set of 12 open-ended items that helped answer the overarching research questions. These questions are as follows:

Introduction: Tell me about your career?

1. What are some organizational culture factors that you've noticed that help or hinder the process? Why?
2. Prior to any session, what prepares people to engage in innovative brainstorming and ideation?
3. How do you gauge the mood of the participants if they will be easier or harder to obtain participation?
4. When you design an event to elicit innovative thought what are the key elements that you include? Why?

5. What do you take into account prior to designing the event? Why?
6. How do you balance incremental change with the concept of disruption?
7. Is there an ideal group size for innovation? And, what team dynamics do you believe have an impact on the overall event? Why?
8. Having a group that disagrees more, do you think are more or less innovative? Why? And, are there built-in allowances for mistakes?
9. What gets in the way of fostering innovation in a facilitated work session?
10. What are your best practices for stimulating innovation?
11. Are there any behaviors that you would emphasize or not display towards participants? Why?
12. How do you judge if you've been successful or not at the end of the event? Do you measure the quality of people's ideas or the event in general?

The survey instrument was positioned to be refined based on feedback from the preliminary review panel and dissertation committee (see Figure 3). Data collection focused on the facilitation effectiveness of innovation facilitators throughout the United States. This data will be used to determine best practices and challenges in innovation facilitation, which will offer advice to future innovation facilitators. The data source utilized were based on a single variable. For this research, interviews were conducted through telephone conference. After receiving approval from Pepperdine's IRB, targeted human subjects received an invitation explaining the study and inviting them to be a part of it. During this initial contact of the final listed members, the approved IRB recruitment script was followed.

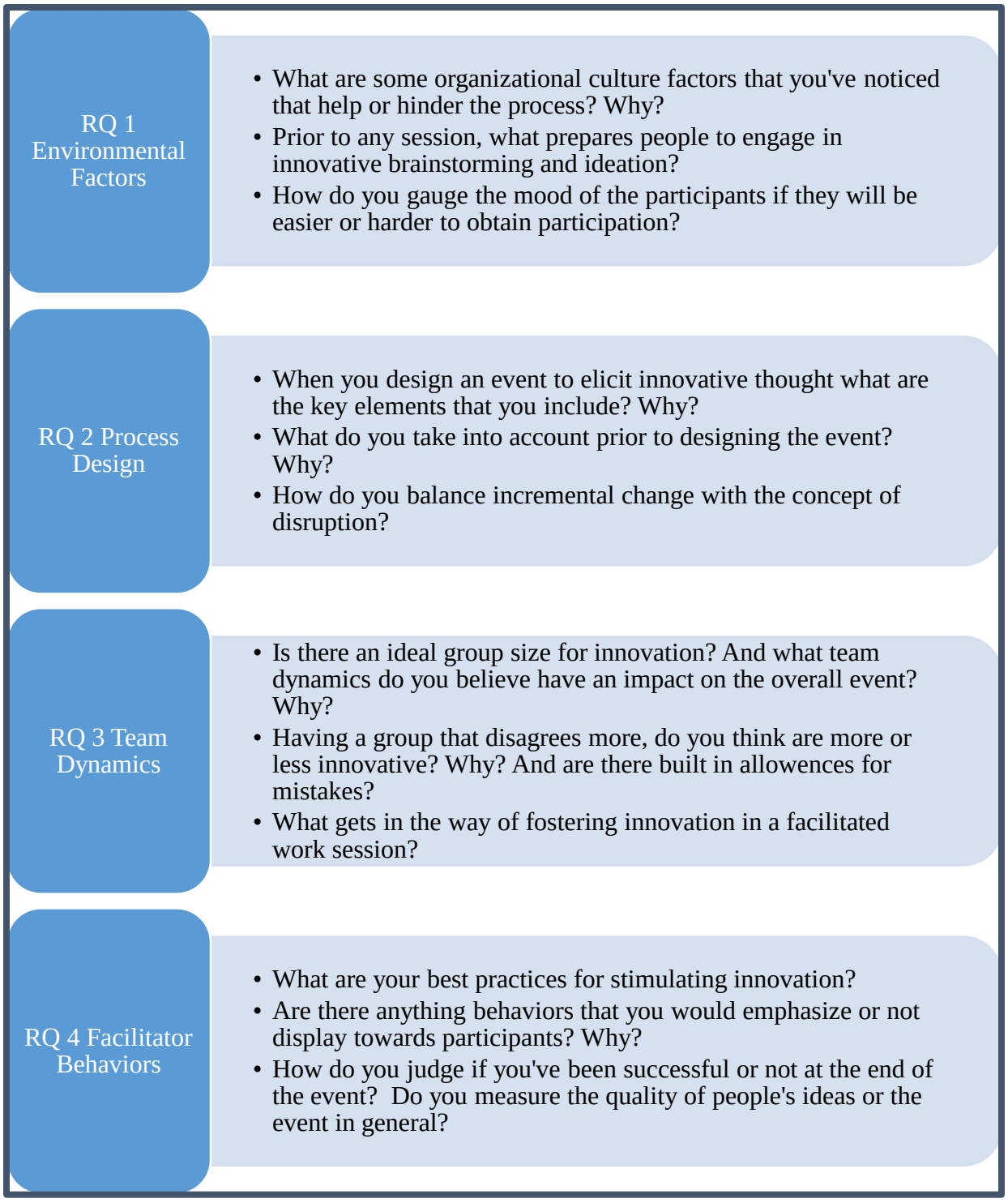

Figure 3. Research questions and associated interview questions.

An essential element of credible research is the assurance that the instrument in the interview protocol and instrument are both valid and reliable. Validity is related to the accuracy of a dataset. Reliability is the consistency in which the data would be collected should the experiment be replicated. Both elements will be discussed in detail below.

Validity is a term often avoided in qualitative research because it is erroneously seen as an indicator of attitudes toward analysis or interpretation that do not fit with qualitative measures (Richards & Morse, 2013). In addition, Creswell (2014) argued that validity can be altered based how the researcher defines validity as part of the study design. Because the researcher has unconscious and conscious biases, it is important that the research design be based on sound data (Richards & Morse, 2013). According to the *Shorter Oxford English Dictionary*, validity is defined as "well founded and applicable; sound and to the point; against with no objection can fairly be brought" (as cited in Richards, 2005, p. 139). For the instrument, validity was established in be following a four-step process:

1. Prima facie validity: Prima facie is a legal term that broadly translated means *at first sight*. The first step of establishing instrument validity was prima facie validity. The interview questions were designed based on the review of the literature and the review of similar qualitative studies. Using these research questions as a basis, the research questions for this study were drafted to be aligned and consistent in terms of question content and structure.
2. Peer review validity: Next, a group of Pepperdine University doctoral students with significant business facilitation experience was asked to serve as peer reviewers. This group included two students, both of whom had over 20 years of facilitation experience in large, global companies. The peer reviewers had conducted comparable research in

their own study areas. After a thorough review and discussion of research questions connected to this study, the peer group provided edits, questions, comments, and revisions to the interview questions.

3. Pilot interviews: Based on the protocol completed in Step 2, a pilot interview was conducted by an innovation facilitator who could have met the criteria for participation. At the end of the interview, the interviewee provided input with regard to clarity, wording, and understandability of the interview questions. Feedback from the pilot interviewee was incorporated into the final instrument and interview protocol.
4. Expert review: Following this peer review, the results were sent to the second group of reviewers: the dissertation committee. The dissertation committee reviewed, asked clarifying questions, and provided feedback on the interview questions. Additionally, the dissertation committee provided feedback as part of the preliminary defense. The feedback from the dissertation committee was incorporated into the finalized version of the interview questions.

According to Richards and Morse (2013), there are two general guidelines for research design validity: (a) the fit of the question, data, and method; and (b) ensuring the researcher can properly account for each step in the analysis. As such, the following strategies were employed to ensure the validity of the qualitative research:

1. Triangulating data;
2. Using multiple raters to check the validity of results;
3. Using descriptive text to illustrate the phenomenon experienced by participants;
4. Stating researcher biases; and
5. Sharing information that runs counter to results. (Creswell, 2014, p. 196)

According to Sandra Mathison (1988), triangulation has become a critical component of the qualitative evaluation. Triangulation helps control bias and reduces the risk of tainted results. The data used for this research were triangulated by using different data sources. A comprehensive literature review was completed on innovation, with a particular focus on team dynamics. Semi-structured interviews were conducted with 15 innovation facilitators who met the population and sample requirements. Member-checking was used to help confirm the accuracy of the data by giving the interview participants a copy of the transcribed notes of their respective interviews for approval. The findings of the research were conveyed with rich, thick descriptions, including thematic findings with considerable detail. In addition, descriptive quotes and exact examples from the participants were used. Researcher bias was considered, identified, and described in the statement of personal bias in Chapter 1. Two doctoral student peers were enlisted to review the transcripts of the interviews and key thematic findings. A debrief session was conducted to obtain feedback from the researcher's peers to add to the validity of the design.

In short, reliability can be defined by a study that would yield the same results if it were repeated (Richards & Morse, 2013). A more detailed definition comes from Marion Joppe (2000):

> The extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability, and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. (p. 1)

Reliability of a qualitative study is highly correlated to trustworthiness. To establish studies with high reliability and validity in qualitative research, Seale (1999) stated that the "trustworthiness

of a research report lies at the heart of issues conventionally discussed as validity and reliability" (p. 266).

Not all scholars are aligned on the importance of reliability in qualitative research. One such objector is Stenbacka (2001), who argued that references to reliability are unnecessary in qualitative research because reliability infers measurements. Preceding Stenbacka, Lincoln and Guba (1985) similarly stated that reliability in qualitative research is less relevant: "Since there can be no validity without reliability, a demonstration of the former [validity] is sufficient to establish the latter [reliability]" (p. 316). Additionally, Patton (2002) asserted that reliability is a direct result of validity in qualitative research.

A three-step process was used to ensure interrater reliability and validity:

1. The principal researcher first coded the data individually by following procedures suggested by David Thomas (2003) for inductive analysis of qualitative data and described in the Data Analysis section of Chapter 3.
2. Results of the individual coding process were reviewed by two peer reviewers with the goal of achieving consensus regarding the individual coding results. These reviewers were doctoral candidates in the Global Leadership and Change program at Pepperdine University. The peer reviewers have previously completed two doctoral courses in qualitative methods and data analysis, and both were completing dissertation work using a similar coding procedure. The coding strategy (Thomas, 2003) and the coding results were presented to the evaluators for verification. Recommendations for revisions to the resulting codes and categories were discussed between the researcher and the two external reviewers. The coding results were accepted only when both reviewers and the researcher agreed on their validity.

3. If the discussion between the researcher and the reviewers did not result in a unanimous agreement, the unresolved points would have been presented to the dissertation committee to make a determination on final coding results.

Data Collection

A core, common, and consistent methodology was applied for each interview as part of this study. The interviews each began with a general greeting and expressing gratitude for the participants' time. Next, the specific interview protocol was reviewed, which included the selection criteria for participation in the study, an overview of the interview topic, an overview of how the actual interview would be conducted, and a discussion of what would happen once the data were collected. It was also explained to the participants that the interview protocol was formulated by the researcher and reviewed by a preliminary review committee and the dissertation committee. At this point, participants were reminded of the informed consent, which was shared with them prior to the interview.

Before the interview began, participants received an overview of the mechanics of a qualitative, phenomenological study, executed as a semi-structured interview. Next, the participant were asked if he or she would permit the interview to be audio recorded. Once permission was obtained, the interview began. For some of the interviews, additional prompting questions were required to get to the essence of the interview questions. Some examples of the additional probing included, "Can you be more specific" and or "Tell me more." Consistent with most semi-structured interviews, specific follow-up questions were asked to expand upon responses or get more detail. Once the 12 questions were all asked and answered, a request was made for the participant to make himself or herself available should there be a need for future clarification or follow-up questions. The participants were also offered a copy of their recorded

transcript to ensure accuracy. The interviews ended with an expression of appreciation for the participants' time and energy, and a reinforced commitment to share the results of the study once complete.

Data Management

The research was conducted in private settings via telephone conference. The researcher's security-enabled and password-protected personal computer was used to record the session. These interviews were saved and coded by number; this code corresponded with the individual's name and was kept separately in a locked safe. The recordings, but not the names of the individuals were then transcribed by the researcher to ensure data security management. Upon transcription of the interviews, a review was performed to redact any personally identifying information. Upon completion of this study, the coded names of the participants will be destroyed.

Data Analysis

A phenomenological study is predicated upon a group or individual having comprehension of a given phenomenon. Phenomenology also requires a baseline understanding of assumptions and biases held by the researcher so as to refrain from impacting the validity a study. The strategy of bracketing was used to help comprehend the assumptions and inherent biases, and the underlying personal experiences. The bracketing allowed for those personal experiences and biases to be understood, to allow the focus to be solely on the experience of the participants in the study, and how they experienced the phenomenon (Creswell, 2014). For this study, the researcher listed all conceivable preconceptions of facilitating innovation, as well as significant experiences that had impacted the researcher's perception of facilitation. The

assumptions and biases were bracketed into themes and were considered comparatively with the thematic results of the study.

The researcher analyzed and transcribed the interview data by utilizing notes, data entry and storage, and coding. Notes were written when ideas or insights emerged from personal observations of the participants, as well as from interview responses that may have led to follow-up questions. Data gathered from the interview process, memos, and observational notes were transcribed. The transcribed data were then segmented into codes. Inductive coding was selected as the analysis approach. Inductive coding is used when the researcher does not bring a predetermined idea of what types of codes to use during the coding process. An inductive coding procedure was utilized that began with an interim analysis. Next, the responses were coded and bucketed into themes. Finally, these themes were examined to provide explanations of the problem of significance. The inductive approach is used frequently as part of qualitative data analysis within the grounded theory (Strauss & Corbin, 1990). The reasons for utilizing an inductive approach are to condense extensive and varied raw text data into a brief, summary format; to establish clear links between the research objectives and the summary findings derived from the raw data; and to develop a model or theory about the underlying structure of experiences or processes evident in the raw data (Thomas, 2003).

From this study's inductive analysis, themes emerged from participant responses. During the coding process, a master list was kept of all the commonalities, codes, and potential themes discovered during the coding process. The results of the coding helped answer the research questions succinctly and directly. The researcher utilized the coding process to create categories within the inductive analysis process. The labeling, description, text, links, and associated models helped to connect the categories to the research questions. After the initial coding, to

establish interpreter reliability, a co-reviewer process was employed. Two external co-reviewers individually assessed the researcher's coding. These co-reviewers are experienced in both qualitative and quantitative research and have done extensive research in the study of innovation leadership. Upon completion of the co-reviewers' assessment, a discussion was held between the researcher and the reviewers, and clarifications and revisions were not needed. The results of the coding were transferred into themes correlated with the research questions and will be presented in Chapters 4 and 5.

Chapter Summary

The objective of this research was to provide facilitators of innovative thinking practical examples of common facilitation strategies and practices that are effective among facilitators. The research questions were restated and the research design was explained. This research was best characterized as a descriptive study that used a qualitative approach. The intent was to describe the common best practices to facilitate innovation. The qualitative methodology was applied to this study utilizing phenomenology, and the research was conducted via interviews. In essence, this study sought to understand phenomenological meaning with respect to the strategies and practices of several authentic leaders based on their lived experiences (Creswell, 2014).

The population was defined as facilitators of innovative thinking workshops. Participants were designated based on purposeful sampling, which means the investigator selects participants because of their characteristics (Richards & Morse, 2013). The sample was comprised of facilitators who met the inclusion criteria. In terms of human subjects consideration, this research was conducted in a manner consistent with Title 45, Part 46 of the U.S. Code of Federal Regulations, Pepperdine's IRB, and the ethical principles of the *Belmont Report*.

Data were collected via comprehensive, telephone conference interviews. Prior to the interviews, the researcher reviewed the interview protocol with participants. In addition, participants were reminded of the researcher's commitment to keeping all data confidential and anonymous. This assurance was given both verbally and in writing, and informed consent was shared. Twelve interview questions related to the four research questions were presented. Validity and reliability were presented, and a statement of researcher bias was shared. The data analysis of the structured interviews included transcribing the interview data and coding it in search of themes.

Chapter 4: Findings

Chapter Overview

Chapter 4 will explain in specific detail the results of the research conducted. Following an introduction, the chapter transitions to a presentation of key findings. Key findings include participant demographics and the results of each interview question. This will conclude with an overall summary of the chapter.

Introduction

The purpose of this study was to determine the best practices exercised by facilitators to elicit greater innovation from a group of participants. This will be a key understanding for organizations aiming to stimulate innovation within their organization. The study intended to determine how facilitators measured success and their recommendations for future facilitators. This study was guided by four related research questions:

- What environmental factors are beneficial and counterproductive to group innovation?
- What process designs are beneficial and counterproductive to group innovation?
- What team dynamics are beneficial and counterproductive to group innovation?
- What facilitator behaviors are beneficial and counterproductive to group innovation?

Presentation of Key Findings: Participants

Data were garnered from semi-structured interviews with 15 participants who were selected through a snowball sampling approach. The data sources for this research were selected based on the population defined by the following two criteria: (a) facilitation of an innovation-dedicated event, and (b) facilitation of an event considered as successful and facilitation of an event considered a failure.

A total of 23 potential candidates were identified using the snowball sampling technique; 65% agreed to participate in the study. While Richards and Morse (2013) recommended having at least six participants, Creswell (2014) proposed that the number be between five and 25. Ultimately for this study, saturation was reached at 15 participants. Of the 15 participants, five were female and 10 were male. The participants had a total facilitation experience of 377 years, with an average of 25.1 years of facilitation experience per person. In order to protect the identity of the participants and their organizations, names were coded with pseudonyms throughout the study.

Data Collection Process

The data collection process adhered to the final interview protocol, as evaluated by the by the dissertation committee and sanctioned by the Pepperdine University's IRB. The study was limited to 15 participants and data were collected over a 2-week period from February 27, 2018, to March 11, 2018. The data collected used a qualitative methodology executed through semi-structured interviews. All interviews were conducted by the principal researcher and lasted from 42 minutes to no more than 76 minutes. All of the 15 participants lived in a geographical location where an in-person interview was not feasible due to travel distance; thus, interviews were conducted via telephone.

For each interview, the specific interview procedures were reviewed, including the selection criteria, an overview of the topic, details on how the interview would be executed, and a discussion of what would happen once the data were gathered. Interviewees were reminded of the informed consent and then the researcher asked the participant if he or she would consent to the interview being recorded. Once receiving authorization, the interview began; upon completion of the interview, a request was made for the interviewee to make him or herself

accessible should further clarification be necessary. The process concluded with the researcher reminding participants that they would receive a write-up of the outcomes of the study once complete.

Data Analysis

The researcher examined and transcribed the interview data by utilizing notes, recording files, and coding. All notes and recording files were then transcribed and then bracketed into codes. Applying the suggestion of Strauss and Corbin (1990), the coding procedure consisted of preliminary analysis, coding, establishing themes, and decoding of the data to establish explanations of the problem. From this study, consistent themes and ideas arose from participants' responses by using the coding process. Following initial coding, a peer-review process was executed to establish interpreter reliability and afterward, two external co-reviewers individually assessed the researcher's coding via a question-and-answer session. This led to minimal clarifications and revisions.

Data Display

The following section outlines the demographic information of each study participant in which the data included gender, tenure, industry, and current residential location.

Gender. The study interviewees consisted of five females (33%) and 10 males (66%). Figure 4 illustrates the demographic data by gender of the 15 facilitators of innovative thinking who participated in the study.

Tenure. Tenure of participants was studied in terms of total years of facilitation experience. Table 1 includes the mean, median, mode, and range of participants' work experience.

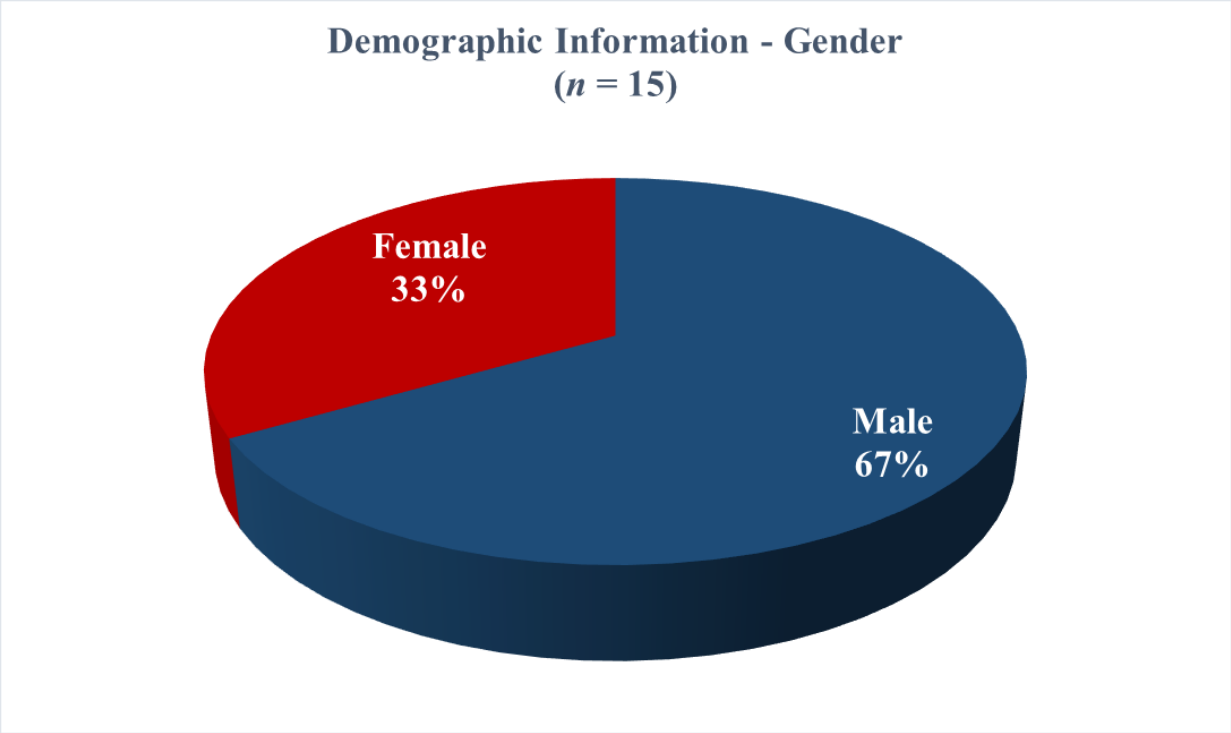

Figure 4. Participant demographics by gender.

Table 1

Participants' Tenure Demographics

Statistic	Total Facilitation Experience
M	25 years
Mode	30 years
Median	25 years
Range	48 years

Industry. Industry variation was desired by the researcher to be able to gain insight from various areas to understand if common themes existed across public and private industries, or if there were dramatic differences between specialties. Figure 5 shows the representative industries; most participants had experience in both industries; private and public only were the least represented industries in the study.

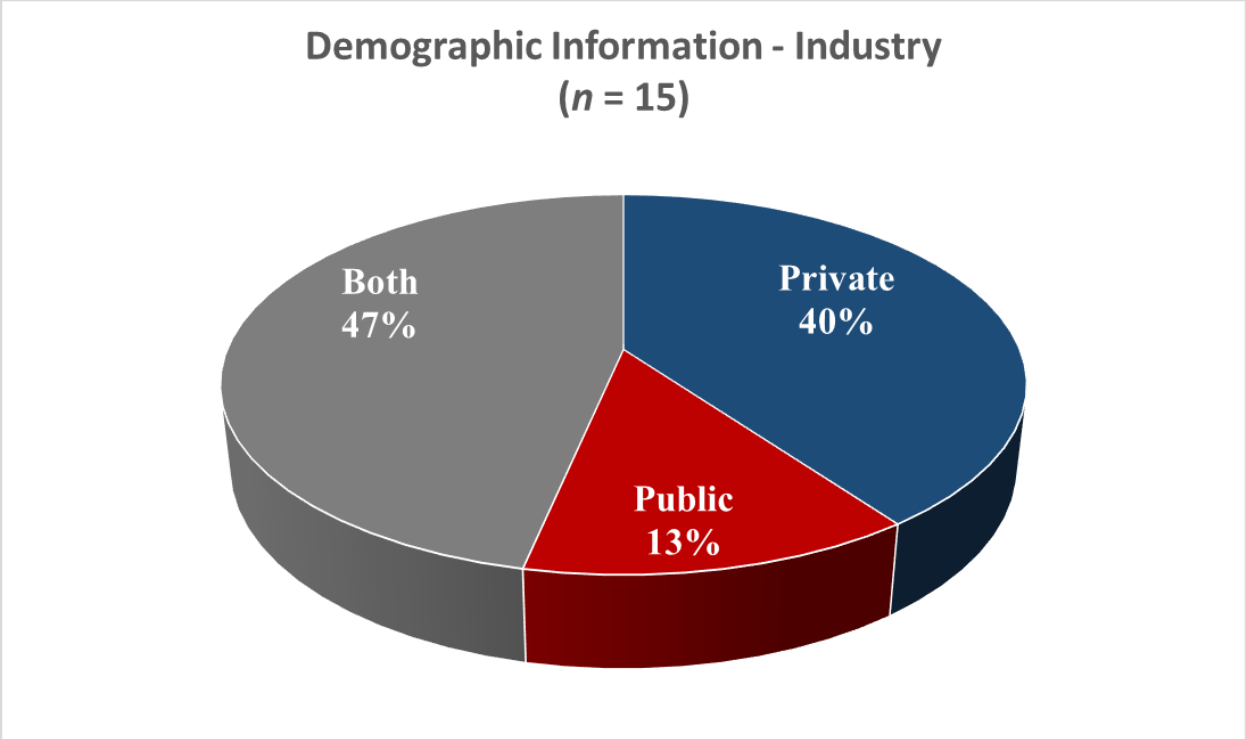

Figure 5. Industry representation of participants.

Current residential location. Current residential location of participants is displayed in Figure 6. Approximately, 46% of the facilitators interviewed were located in the West.

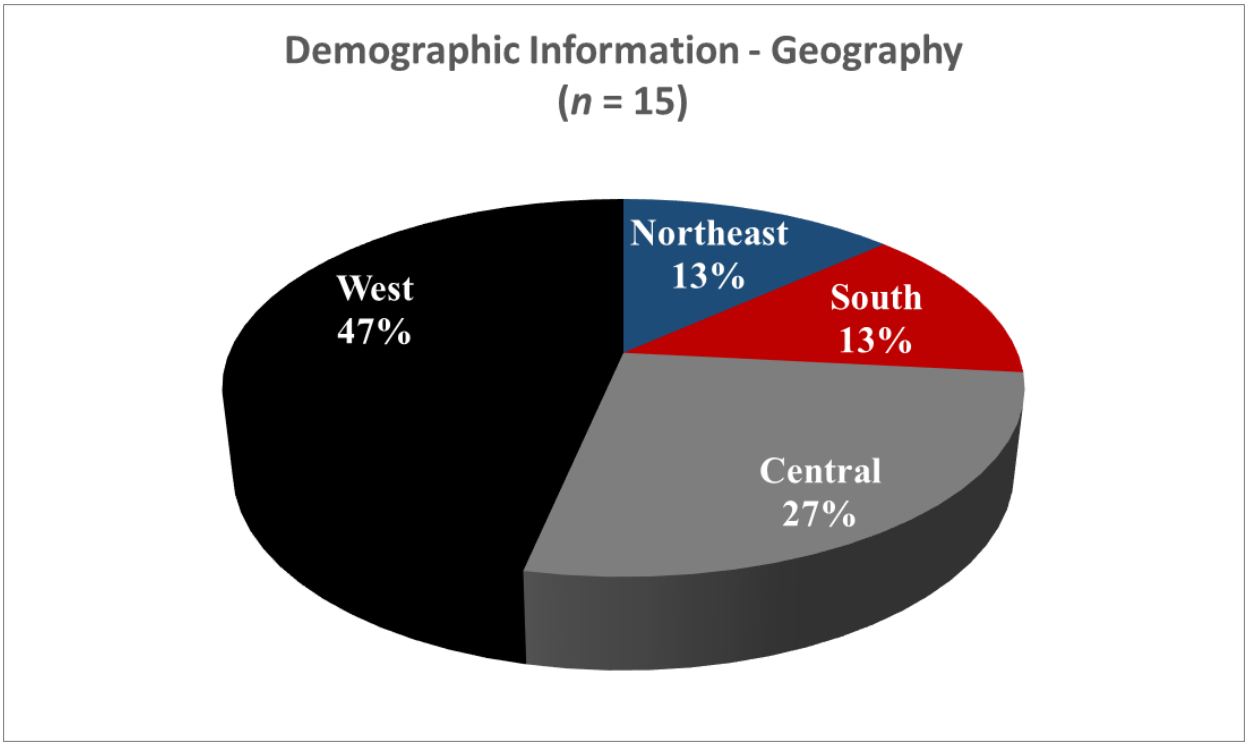

Figure 6. Residential geographic location of participants.

Data Collection Results

The following common strategies and best practices were derived from data collected during the semi-structured interviews. The strategies and practices applied by facilitators were intended to create greater innovation in a group setting. Research Question 1 asked what environmental factors were beneficial and counterproductive to group innovation? In order to answer the question, participants were asked three different interview questions:

1. What are some organizational culture factors that you've noticed that help or hinder the process? Why?
2. Prior to any session, what prepares people to engage in innovative brainstorming and ideation?
3. How do you gauge the mood of the participants if they will be easier or harder to obtain participation?

Interview Question 1 was included to understand if there were certain aspects of an organization's culture that helped to enable innovation. The most common response to helping out the innovation process was leadership support, and the most common response to hindering innovation was risk adversity. The results are further broken down in Figure 7.

Leadership support was identified six times by respondents as being a key to helping or hindering the innovation process. The positive examples included creating a supportive environment to share ideas freely, to encourage risk-taking, and to emphasize creative thought. This aspect is punctuated with the quote from Participant 14: "Leadership is the number one organizational cultural factor that will help or hinder the end of any facilitation process. Period."

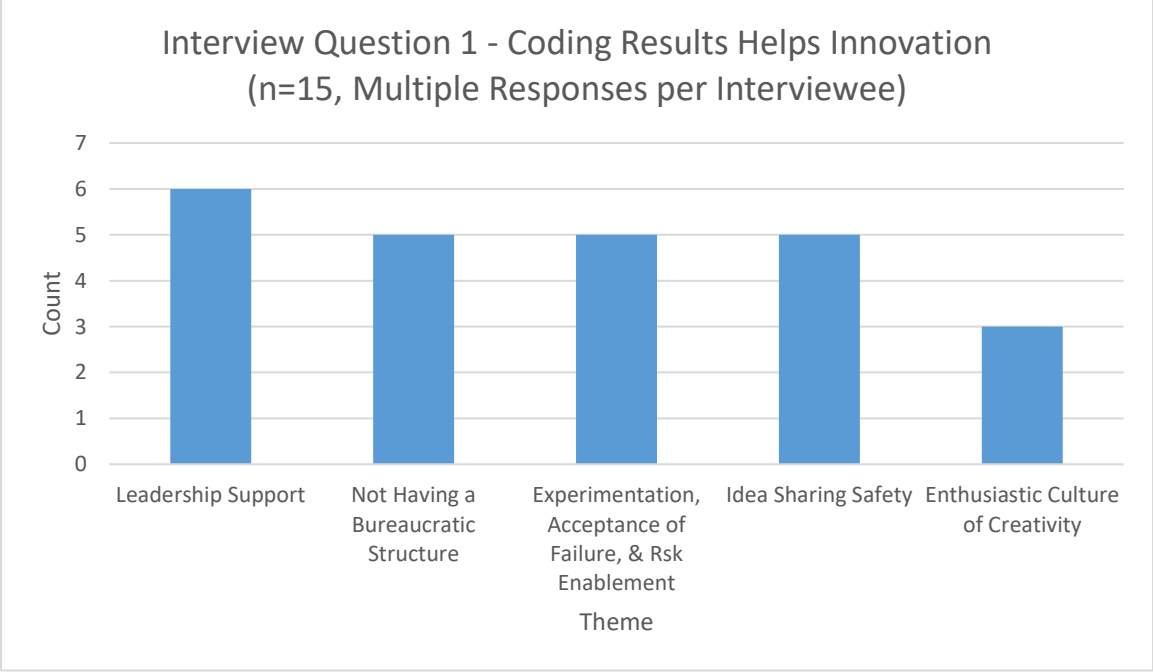

Figure 7. Organizational cultural factors that helps innovation.

Associated with leadership support for innovation was not having a bureaucratic structure in place. It was noted that the actual organizational design structure inherently builds redundant

layers of personnel which slows communication and innovative thought throughout the organization. It was also discovered that hierarchically based organizational structures at times led to acquiescing to the thoughts provided by the top leadership regarding innovation practices.

Experimentation, acceptance of failure, and risk enablement were acknowledged five times by participants. These center around a cultural context of environments that systematically promote these elements, leading to greater innovative thought among employees. As Participant 9 stated, "The antithesis of this culture is where people have been hired to do, rather than think."

Idea-sharing safety was recognized by five individuals. The genesis of this comment centered on participants in innovation activities not worrying about their coworkers judging their ideas and therefore losing credibility. Participant 15 captured this eloquently: "Organizationally, the same kind of spirit is important for people to be interested in what others have to say. Assuming each person has something to contribute and build on that."

Lastly, four participants acknowledged the importance of an enthusiastic culture of creativity. This falls along a similar theme of a culture of experimentation and feeling safe to share ideas, but enthusiasm for creativity spoke to a culture that centers on being different, unique, and celebrating those distinctions. Participant 7 stated the following:

> When coming up with innovative ideas, the first half is the ideas that everyone already knows; the truly innovative organizations are the one that focuses on the second half of those lists. Those are the ideas that are hard to get, they are elusive, and they are innovative.

Interview Question 2 was included to understand if there was a common practice in preconditioning a participant's mindset to foster greater innovation. The most common response

helping out the innovation process was conducting pre-session interviews. The results are further broken down in Figure 8.

Pre-session interviews were identified by six individuals as their method of engaging with participants prior to a workshop. This interview before the session was used for a number of purposes. Pertaining to preconditioning participants prior to a workshop, this interview was identified as a process to help prepare or focus the participants' mindset toward being more creative.

Six participants recognized that establishing pre-work by sending out a thought-provoking magazine article or survey had positive results. These articles or surveys acted as a pre-conditioning lever that helped focus the mindset of the participant.

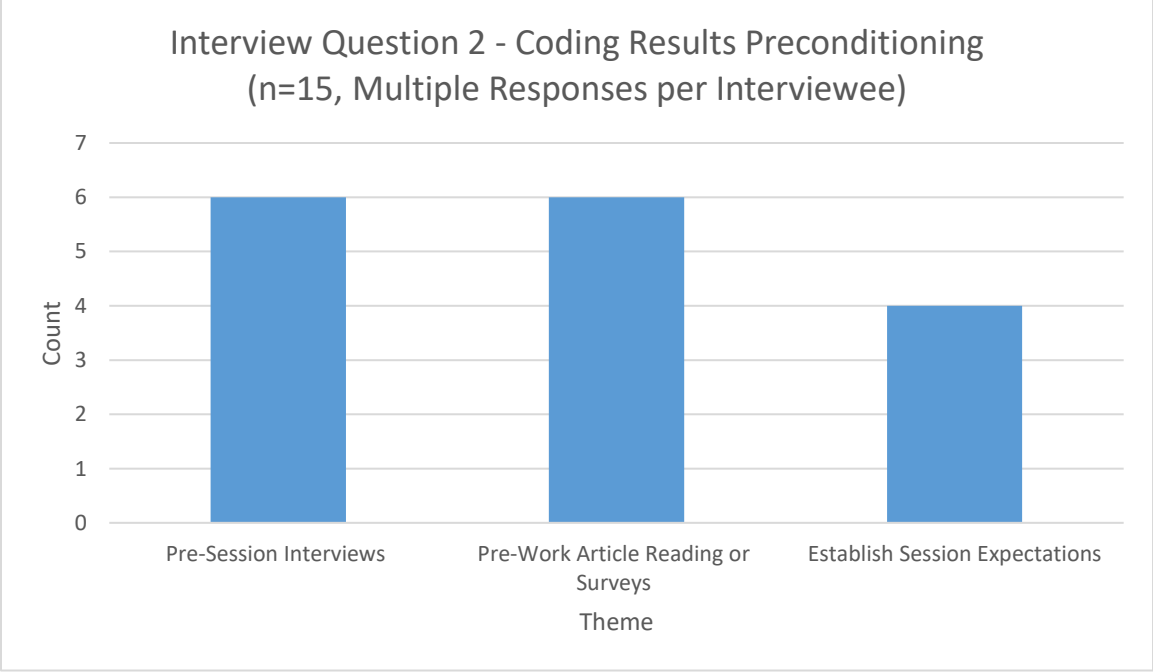

Figure 8. Preconditioning for innovation.

While a different methodology from an interview, the desired end result remained the same—focusing the mental state of the participant to innovation. For example, Participant 1 stated the following:

> I will give them an area in which we are going to focus on and I will give them an article on the industry segment or provide them with some key statistics and background so that everyone is coming in with the same understanding of the landscape.

Establishing session expectations was acknowledged by four individuals. The communication medium was not consistent among respondents, but their intent was the same: setting workshop guidelines prior to beginning. These guidelines focused on logistical concerns of the meeting—location, start time, and so on—but the main expectations were behavioral, conveying the need to take risks, express ideas, and be receptive to new ideas.

Interview Question 3 was included to understand if there was a way to determine the overall mood of the participants, and if mood impacted the overall event. The most common response helping out the innovation process was conducting pre-session interviews to understand the mood of the participants. The results are further broken down in Figure 9.

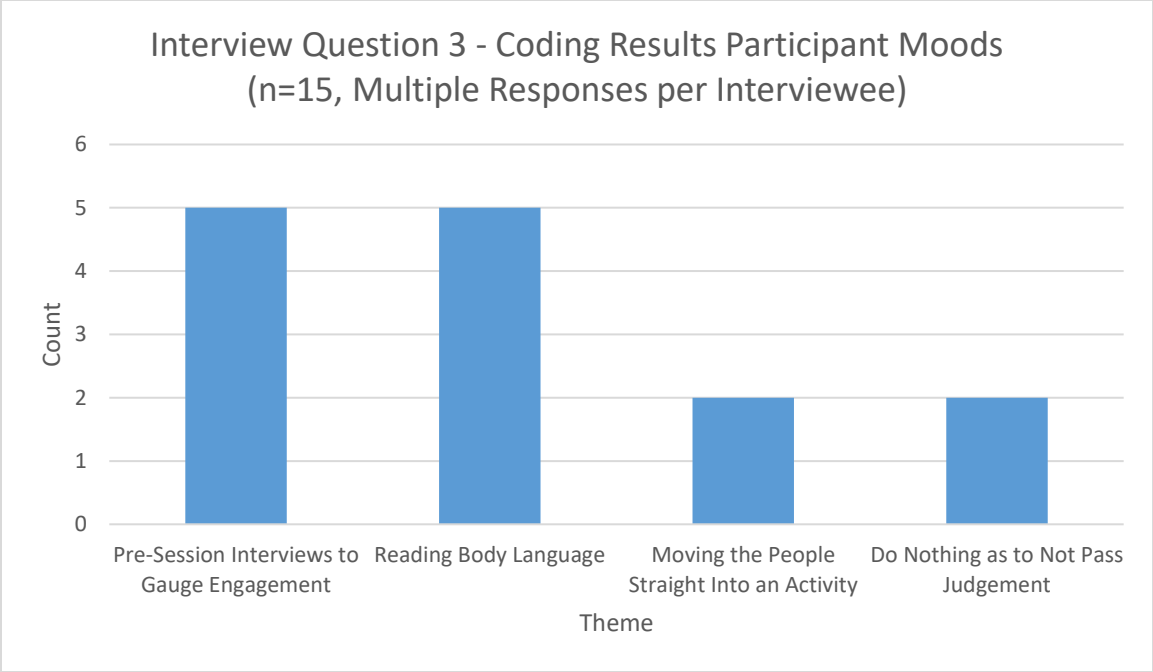

Figure 9. Participant moods.

Five respondents recognized that their ideal method of gauging an audience's level of engagement was to conduct a pre-session interview. By being able to meet prior to the session, the facilitator would be able to determine receptivity to the ideation event as well as gain greater insight into the workshop topic. Most importantly, pre-session interviews provided an in-depth window into the organizational culture, which can be used to help shape the design of the workshop.

Reading body language was acknowledged by five respondents as their approach to gauging the mood of the participants. Some respondents offered slight insight into their technique of reading body language, from multitasking on their computer during the session to lack of eye contact. Four of the respondents did indicate though, that reading body language was not an exact science and that they had been wrong a number of times when trying to judge mood.

Research Question 2 asked what process designs were beneficial and counterproductive to group innovation. In order to answer the question, participants were asked three different interview questions:

1. When you design an event to elicit innovative thought what are the key elements that you include? Why?
2. What do you take into account prior to designing the event? Why?
3. How do you balance incremental change with the concept of disruption?

Interview Question 4 was included to understand if there were specific elements to designing events that would help elicit innovation. The most common response helping out the innovation process was innovation enablement-specific activities. The results are further broken down in Figure 10.

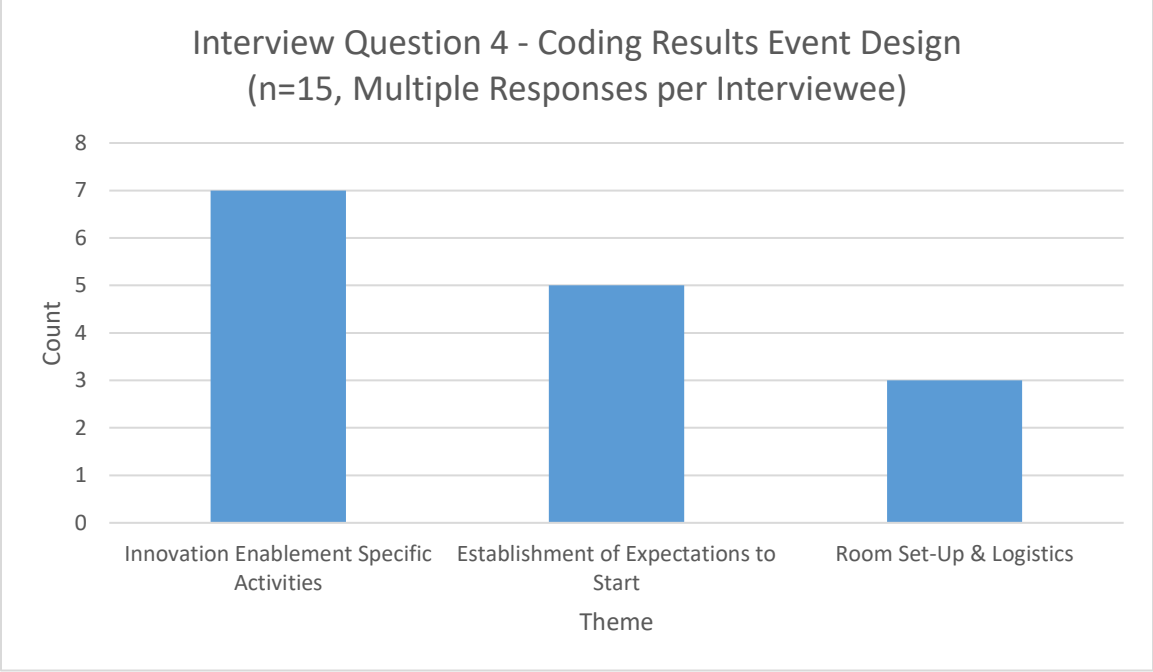

Figure 10. Event design elements.

Seven interviewees identified innovation enablement-specific activities as one of the key design elements to an innovation-based workshop. A number of activities were described, all

focused on stretching the mental capacity of each attendee. For example, Participant 11 stated that they "use a conversational method that helps people think deeply starting with objective data and asking for people's reactions, associations, or anything that triggers internally for them a desire to explore meaning and insight." Participant 8 noted that sometimes they will "apply a technique of attempting [to have] the group come to a decision on a topic prematurely and then reframe the audience to ask, 'What do we need to know before we can decide?'"

Establishing expectations at the beginning of the session was acknowledged by five individuals as a key design element of their workshop. These individuals spoke of having a process flow whereby establishing expectations triggered all of the event activities. For example, Participant 14 stated the following:

> My philosophy of designing an event is kind of like Shakespeare, where you want to build a peak and you don't want to hit the climax too soon. You want to build up to act three and hit the climax in act four so that when you hit act five and send people out the door they have the momentum to go do what they've just been developing.

Three participants recognized the room set-up and logistical details as key design elements. The focus on these items tied directly to the overall attendee experience and designing the environment to elicit greater creativity. Participant 1 captured these thoughts: "We are trying to shock them right out of what normal is. We want them to think this is not normal and that is ok." Participant 1 further explained their choice of brainstorming materials and the level of detail:

> I've got post-it-notes that I use that are not square, they are hexagonal. When you stick them up on the wall, they tessellate like a honeycomb and that is not normal, but it helps reinforce that being different is ok. When ideas start to group together, I put a different

colored post-it note in the middle of the honeycomb and that identifies the cluster of ideas.

Interview Question 5 was included to understand if there was anything that a facilitator took into consideration from participants and the situation to assist in the design of their event. The most common response helping out the innovation process was understanding the culture and environment. The results are further broken down in Figure 11.

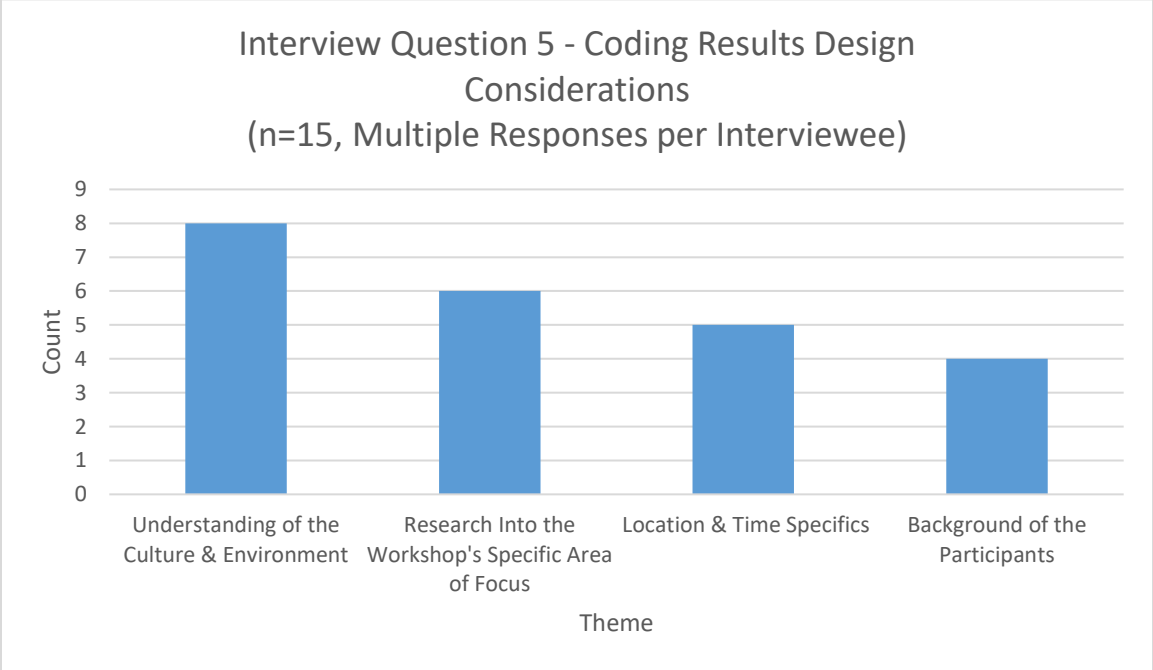

Figure 11. Considerations for event design.

Eight participants recognized a need to understand the cultural environment prior to designing the event. This leads to design specifics relevant to what attendees would be receptive to as well as the team dynamics that might affect the overall event. Participant 12 punctuated this thought: “So, you have to do your homework because they are going to tell you the marketing material about the company. You have to probe and look to outside sources sometimes to get the real level of depth.”

Research into the workshop's specific area of focus was identified by six individuals. This helps the facilitator design the workshop to the specific end goal, helping to build a more personalized experience. Participant 13 established this point: "I want to determine the rational aim and experiential aim for the meeting so that I know what I want people to know or think walking away from the meeting—what I want them to experience."

Five participants identified a need to understand the location and time specifics to design an effective event. All five noted that it was a necessity to know these pertinent specifics prior to the design as the event would be significantly different if 4 hours were given versus 4 days. Participant 11 also described an effective technique in longer sessions: "Using a visual graphic recording facilitation so that people can see their ideas in graphic form in color and shape in relation to each other."

Understanding the background of workshop participants was identified by four interviewees. While this provides insight into the culture and environment, it also increases the facilitator's understanding of individuals' backgrounds. Specifically key is learning their specialties, their perspectives, and cognitive thought processes prior to designing an experience.

Interview Question 6 was included to understand how a facilitator balances the desire for quick, incremental innovative ideas with the momentous efforts to identify groundbreaking innovative ideas. The most common response was to let the clients decide the direction of the change they were willing to undertake. The results are further broken down in Figure 12.

Six participants indicated that they let the clients guide the direction regarding whether they want the change outcomes to be incremental or disruptive to their current work. This adheres to the model of maintaining neutrality toward the outcome and focusing solely on the process of facilitation.

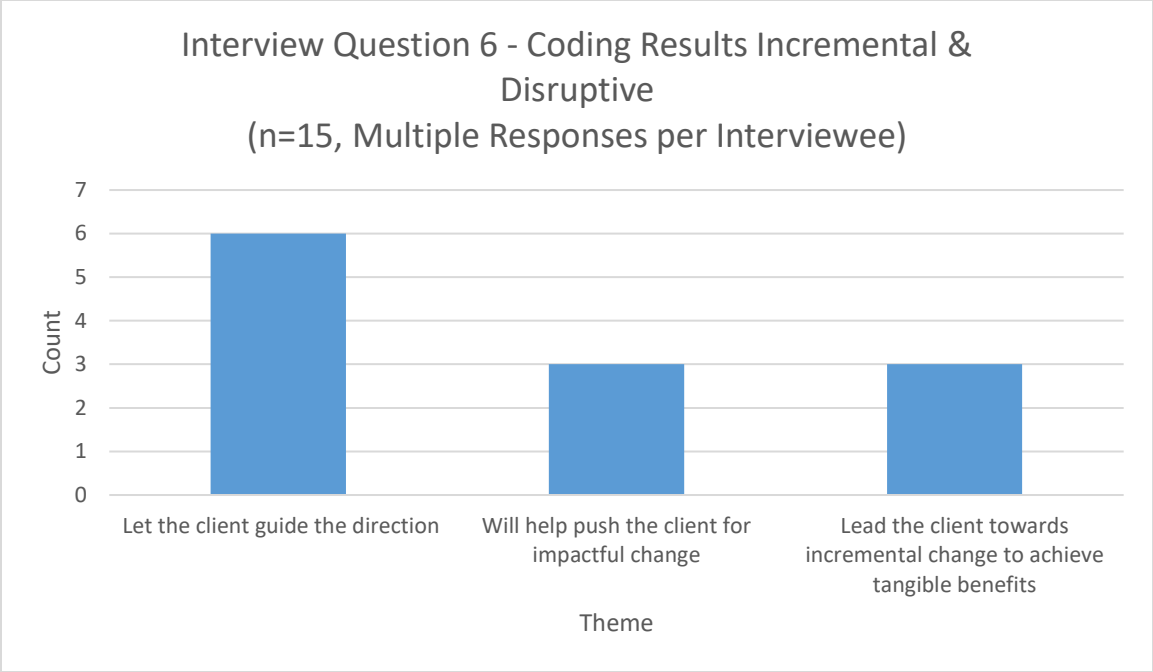

Figure 12. Balancing incremental with disruptive innovation.

As Participant 2 stated, "I avoid program management impacts as a facilitator and just say here's things for you to consider."

Helping push the client for impactful change was identified by three of the participants. Facilitator identified their role in the process as more of a consultant than as a facilitator; their intent for leading the workshop was to achieve an outcome that would be significant. Participant 7 clarified their technique saying, "When they ask the question about what difference this is going to make, people have to be honest about it. I follow this with are these the outcomes that will make the difference that they are seeking."

Three of the participants acknowledged that they would lead the client toward incremental change. This came from the thought process that they wanted the attendees to be able to conclude their event with the ability to achieve tangible benefits versus goals that were unrealistic and not likely to occur. This was further reinforced by Participant 14:

> I prefer the vision workshop to where we've got a pretty thorough handle on our current reality. Because while I don't mind them thinking outside the box, I don't want it to be pie-in-the-sky stuff. I want it to be grounded in reality a realistic vision.

Research Question 3 asked what team dynamics were beneficial and counterproductive to group innovation. In order to answer the question, participants were asked three different interview questions:

1. Is there an ideal group size for innovation? And, what team dynamics do you believe have an impact on the overall event? Why?
2. Having a group that disagrees more, do you think are more or less innovative? Why? And, are there built-in allowances for mistakes?
3. What gets in the way of fostering innovation in a facilitated work session?

Interview Question 7 was included to understand if there was an ideal size for innovation events and to understand if there was a specific team dynamic that helped facilitate this process. The most common response was that the ideal size was between five and 12 participants, and that team trust helps out the most with the innovation process. The results are further broken down in Figure 13.

Eleven participants recognized having between five and 12 people as an ideal size for generating innovation. Two interviewees identified sizes greater than 12, and two interviewees identified that there was no ideal size. The common theme on the size was to have the group large enough to represent the various domains of experience and cross-functional expertise, but small enough so that everyone in attendance would be able to voice their opinion.

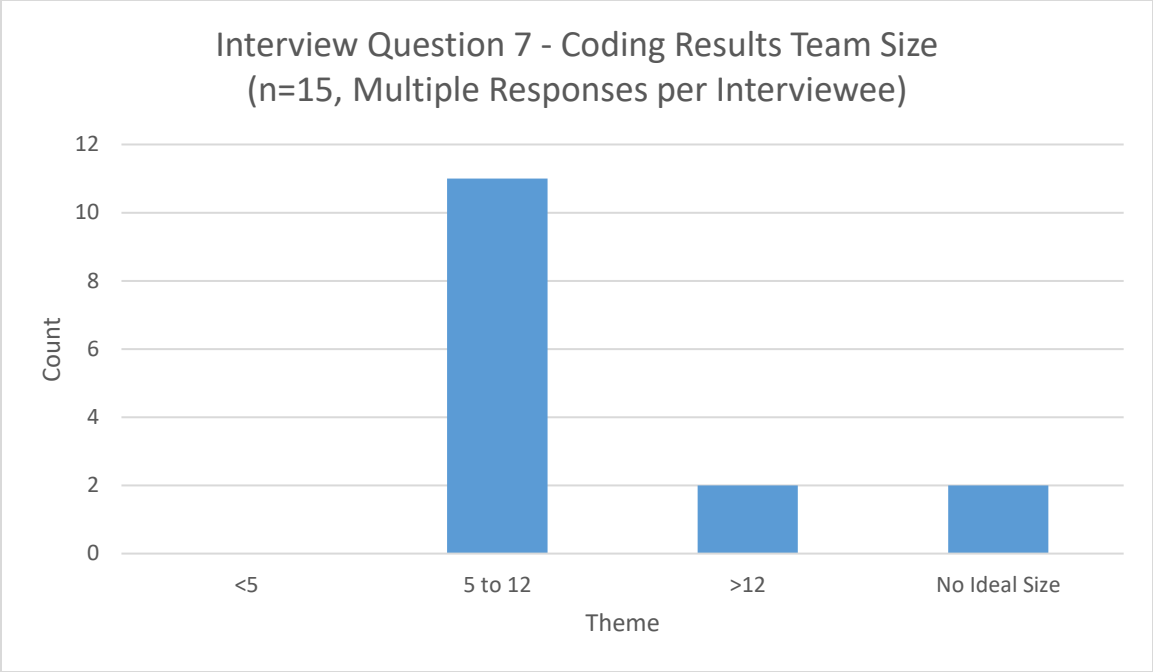

Figure 13. Team size.

The second half of the question focused on team dynamics, for which six interviewees identified team trust as a key contributor to greater innovation. This aligns with having a safe environment in which individuals are able to take risks and share their opinions freely. Participant 1 had a unique response, bridging the gap between room logistics and team trust: "What I really like is the 18-inch wide tables that are really skinny. Putting people on both sides—that helps reinforce a closeness."

Three participants observed that ideally, a group should consist of a diverse membership with diverse domain knowledge. This ties back to a consistent theme from the literature review that having a diverse group of people will provide a diverse set of insights. These three interviewees discussed how different personalities and subject matter expertise leads to different and more creative solutions (see Figure 14).

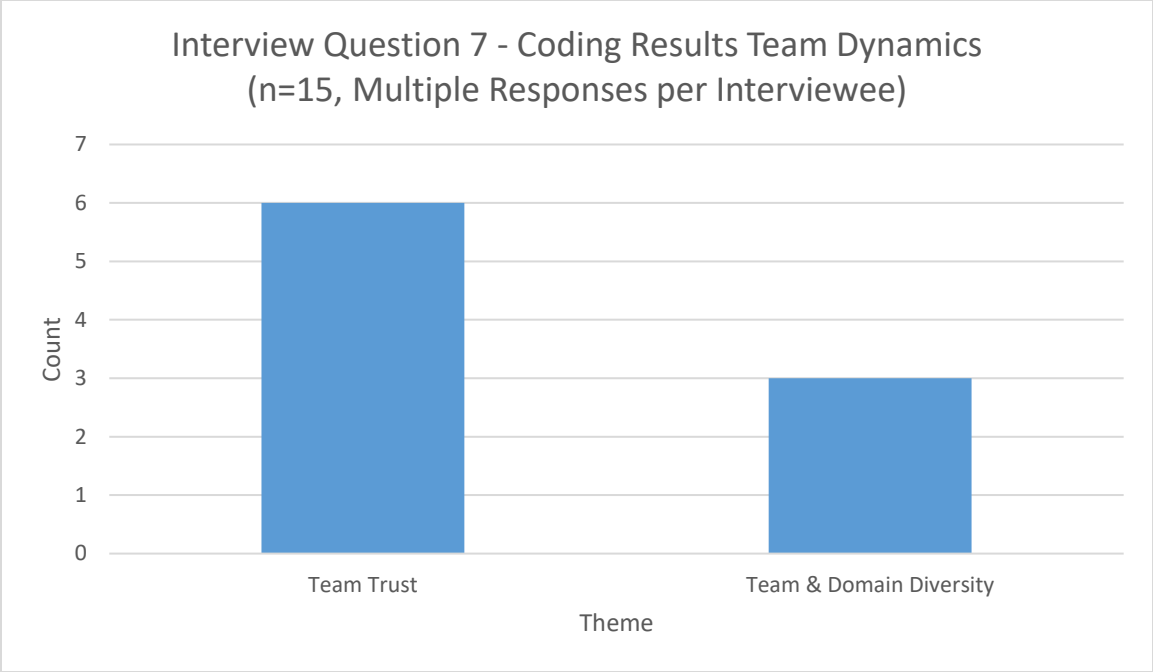

Figure 14. Team dynamics.

Interview Question 8 was included to understand if having a group that disagreed more was more helpful for innovation or not. The most common response was that having disagreements was more effective in generating innovation. The results are further broken down in Figure 15.

Nine of the participants recognized that having a team argue or debate had a positive effect on the innovation process. Participants believed that having participants discuss and argue for or against ideas was a healthy approach. Debate elicits greater insight into the idea and helps to apply a variety of perspectives.

No one observed that having disagreements led to a negative innovation outcome; two respondents identified that having disagreements had no effect on the overall outcome. Lastly, two respondents identified that a team having disagreements could have a positive or negative innovation outcome, which was further explained by Participant 3:

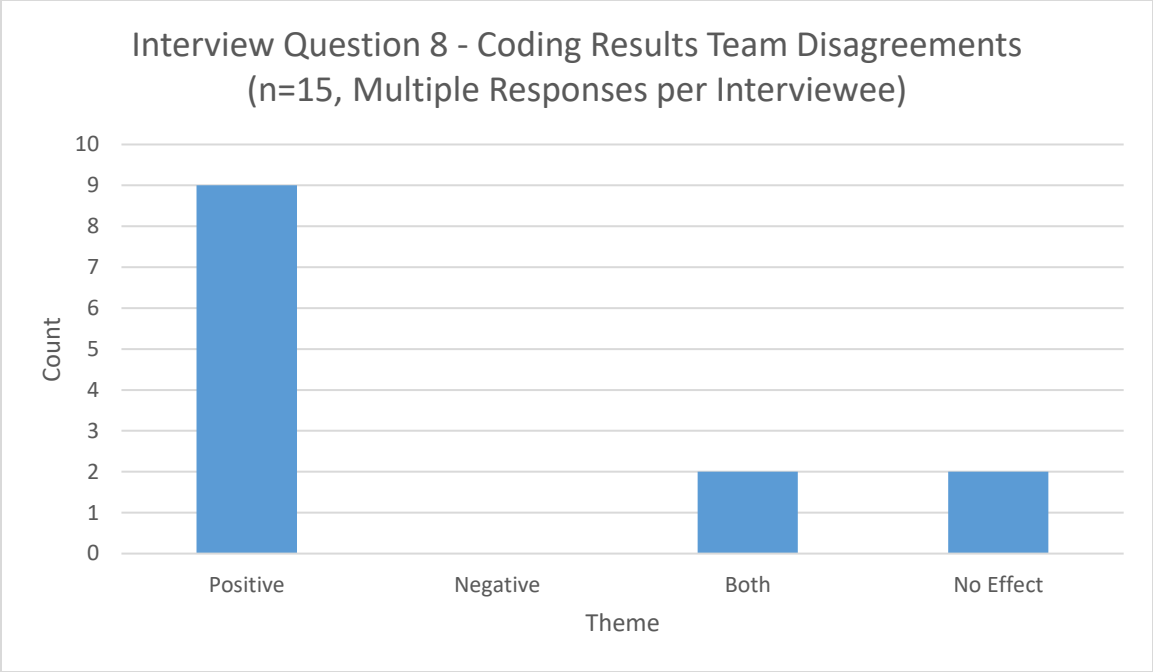

Figure 15. Team disagreements.

If people are disagreeing, it could be a sign that multiple people have multiple ideas around a strategy or it could be a sign that people don't get along with each other. You have to look at the root cause of it; you can't look at a disagreement and then just say okay here's what we're going to do about it.

Interview Question 9 was included to understand if there were specific team-based actions that took away from the innovation process. The most common response was not having a safe environment to share thoughts. The results are further broken down in Figure 16.

Seven respondents acknowledged that not having a safe environment to share thoughts was a significant factor in reducing innovation. Having an environment that was not conducive to sharing, in turn led to a lack of ideas being openly shared. This follows a similar trend from the review of literature where people are more likely to share their creativity with a group when they feel that their idea and credibility won't be attacked.

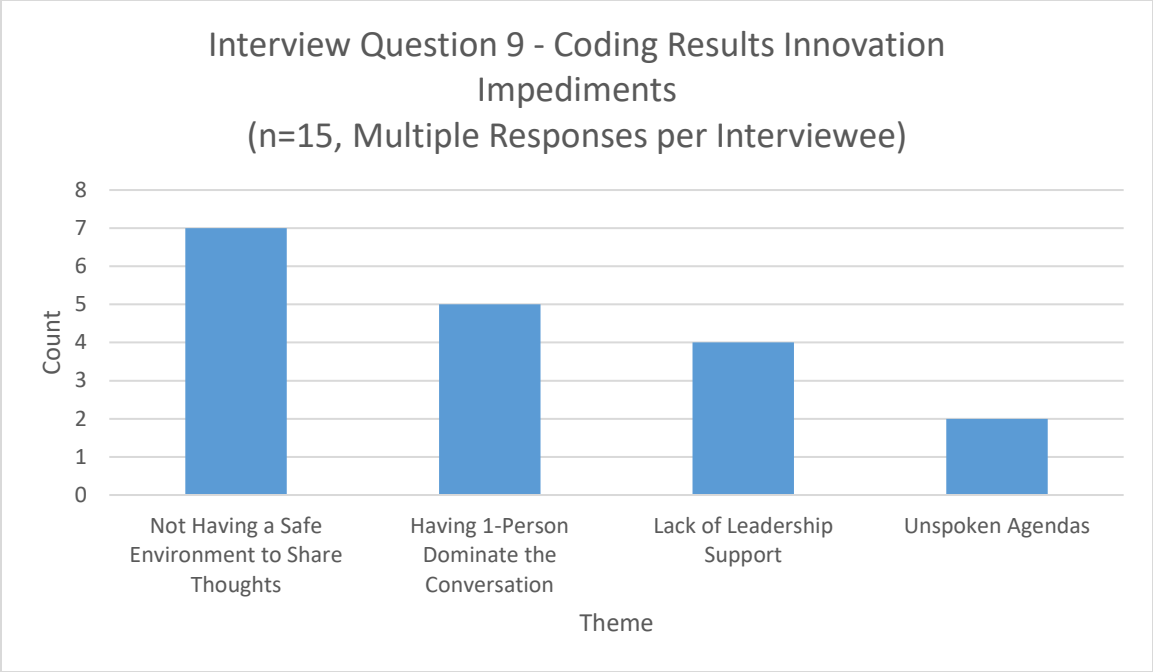

Figure 16. Impediments to innovation.

Having one person dominate the conversation was identified by five respondents. This was explained as having a person that consistently inputs their perspective and doesn't allow other people to express their perspectives. This hinders the innovation process by reducing the perspectives expressed during the event.

Four respondents indicated that having a lack of leadership support gets in the way of fostering innovation. The intent behind the comments was that the behaviors of the present leadership have an ability to encourage or discourage the flow of ideas. Participant 4 captured this sentiment:

> When you are trying to get a team to think in the right direction and the leading member keeps putting it down, the team eventually gets to the point that all they are ever told is no, so why should we keep trying here.

Research Question 4 asked what facilitator behaviors are beneficial and counterproductive to group innovation? In order to answer the question, participants were asked three different interview questions:

1. What are your best practices for stimulating innovation?
2. Are there anything behaviors that you would emphasize or not display towards participants? Why?
3. How do you judge if you've been successful or not at the end of the event? Do you measure the quality of people's ideas or the event in general?

Interview Question 10 was included to understand the best practices of facilitators to elicit innovation. The most common response helping out the innovation process was to conduct activities to get people to incorporate different perspectives. The results are further broken down in Figure 17.

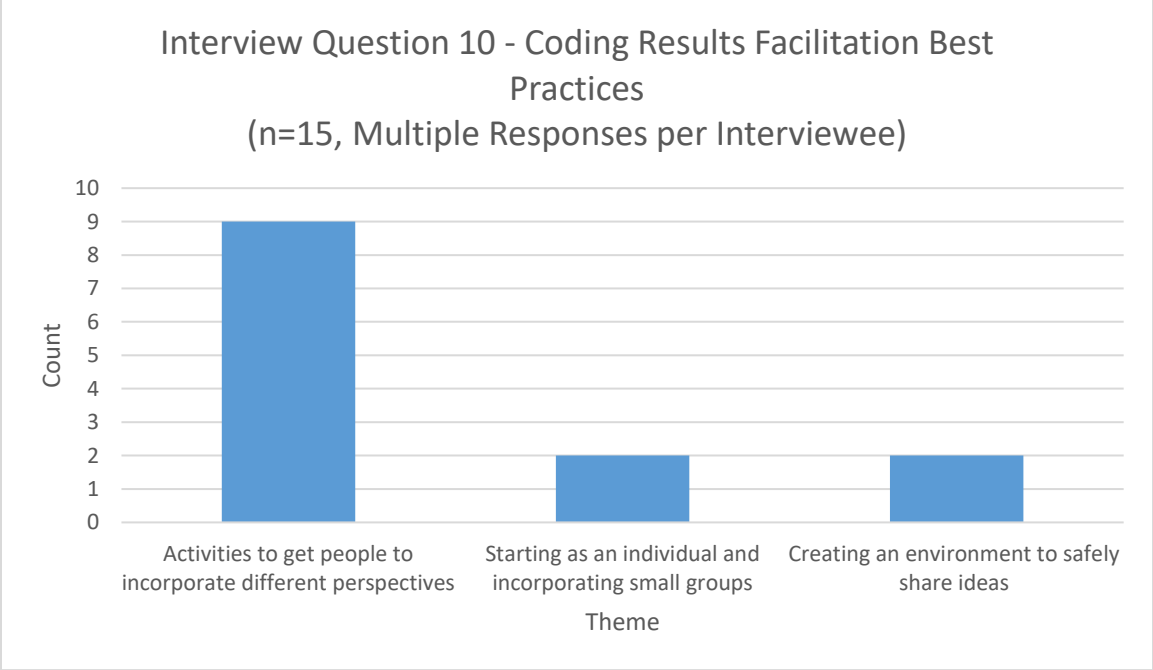

Figure 17. Best practices of facilitators.

Nine respondents indicated that applying activities to get people to incorporate different perspectives was among their best practices for stimulating innovation. There were a variety of activities identified, ranging from having participants identify the most uses of a paper clip to practicing an empathy exercise. Respondent 9 shared the following: "If you form a question that a person can't answer, give them an image and ask the question again with a different context to what you are trying to determine."

Two respondents focused specifically on having individuals initiate their brainstorming by themselves and then would have individuals divide into small groups. This would provide individual reflection and the ability for everyone to participate from the beginning without an external interruption. Two respondents also emphasized the value of creating an environment to safely share ideas, which elicits the most innovative thought.

Interview Question 11 was included in the study to understand if there were specific behaviors that were positive or negative to the innovation experience. The most common response helping out the innovation process was being respectful. The results are further broken down in Figure 18.

Five respondents indicated that being respectful toward participants was highly effective in conducting an effective innovation workshop. The focus was on creating a professional atmosphere where everyone's perspective mattered and was of value. Participant 1 expressed this with the following example:

> I write down everything that a person says. If I were to judge their idea and not write it on the whiteboard, that is the equivalent of me calling the idea stupid and I have just communicated to the entire room that I am judging your ideas.

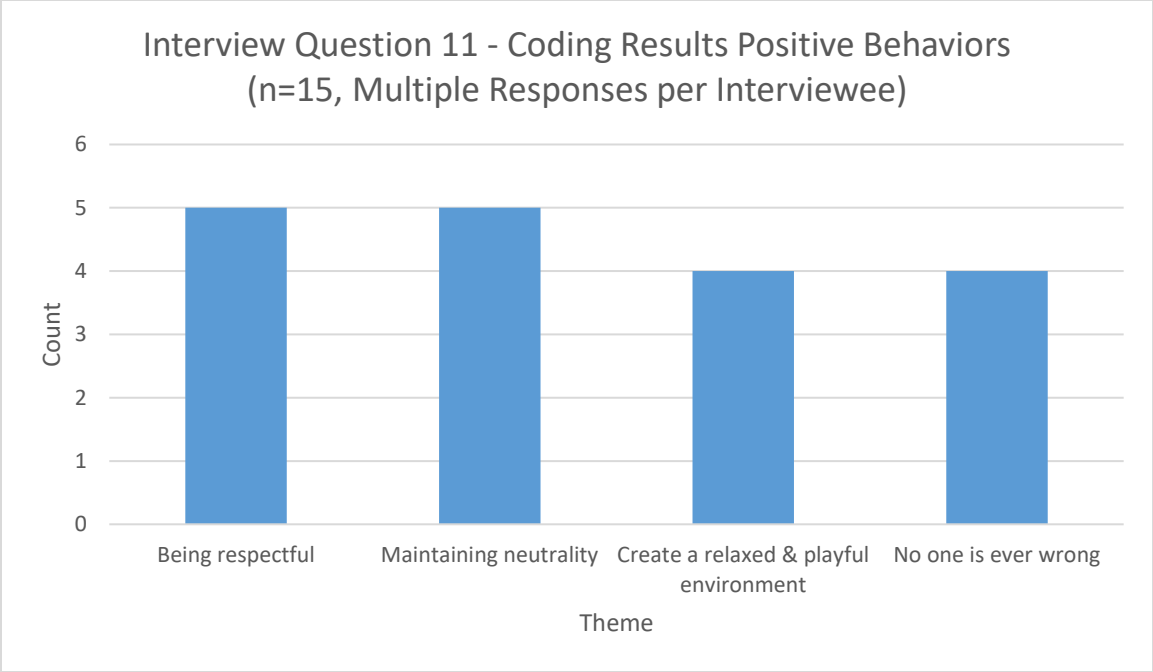

Figure 18. Behaviors that are positive for innovation.

Maintaining neutrality was observed by five individuals as a key facilitator behavior. This neutrality creates an open role where the facilitator is not in a position to choose right or wrong but rather can guide the discussion of the group, helping them to determine the answer for themselves. Participant 4 emphasizes this point: "I want them to come up with what they're going to do because they will add more value to the process than if they believe they are being controlled by me to go down a certain path."

Four respondents indicated that their goal as a facilitator was to create a relaxed and playful environment in which no one is ever wrong. The behaviors that they expressed go into creating a warm environment of sharing. If the environment is stressful, tense, and critical, individuals will not express their thoughts.

Interview Question 12 was included to understand how a facilitator measured the success of events they conducted. The most common response was to elicit participant feedback. The results are further broken down in Figure 19.

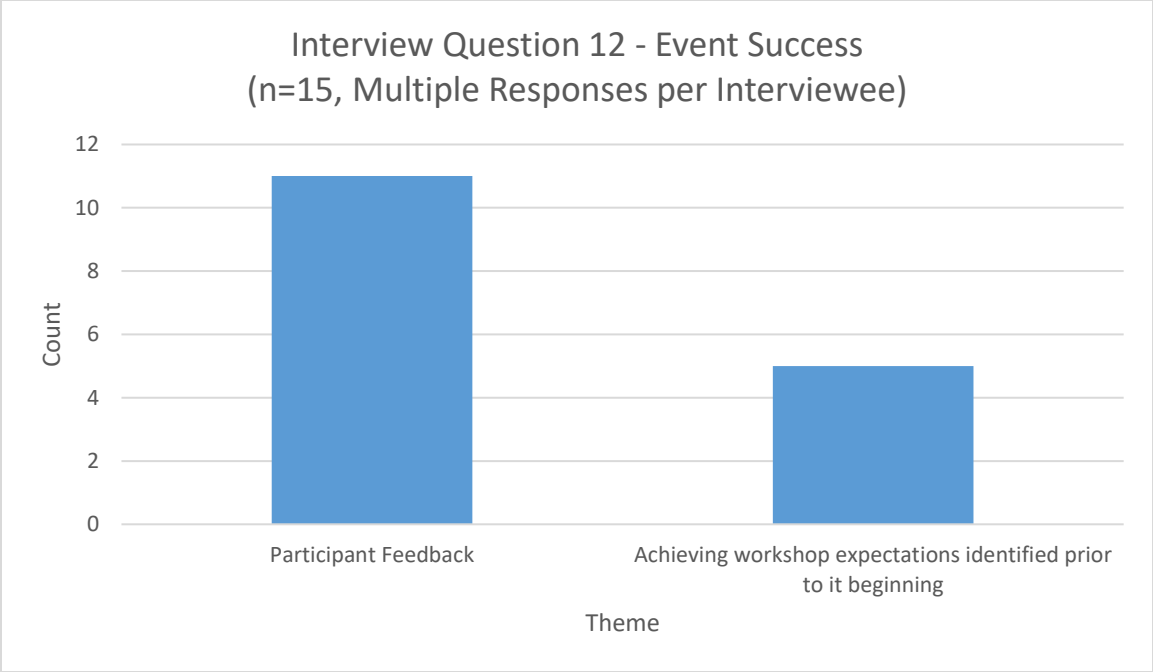

Figure 19. Success of event measurement.

Eleven interviewees indicated that they relied on participant feedback to determine the effectiveness of an event. This feedback was garnered through personal face-to-face discussions, feedback surveys, or by reading body language. Participant 3 captures this sentiment: "Have you been able to help them get to a place where they otherwise would not have been able to get to without your assistance? That's the sign that you've been effective."

Five respondents specified that the ability to achieve the expectations identified at the beginning of the workshop was the true sign of an effective workshop. In many cases, this was based solely on what was identified at the beginning and did not take into account the different variations experienced in an open session. Participant 1 described this open question very effectively:

> I've done what you call a patent party, where you have a groupthink through some intellectual property points that we can fence off and we can count the number of filings we achieve. While these are hard metrics of effectiveness, I try to shy away from them as

most workshops you are dealing with massive amounts of uncertainty and you can interrupt the innovative process by trying to refocus to hit an arbitrary number.

Research Question 1 asked what environmental factors were beneficial and counterproductive to group innovation. Three interview questions were designed to answer the research question. The first question found that obtaining leadership support outside of a bureaucratic structure was the most helpful to the innovation process. The second question found that conducting pre-session interviews, issuing pre-work, and establishing expectations were the most effective means to prepare participants for a facilitation session. The third question found that conducting pre-session interviews to gauge engagement and reading body language during the event were the best ways to determine the level of engagement of the participants.

Research Question 2 asked what process designs were beneficial and counterproductive to group innovation. Three interview questions were designed to answer the research question. The first question found that innovation enablement-specific activities and the establishment of expectations during the beginning of the event were key design elements to include in each workshop. The second question found that prior to designing an event, it was necessary to understand the culture and environment along with research into the workshop's specific area of focus. The third question found that when dealing with disruptive innovation and incremental innovation as a facilitator, it is ideal to let the client guide the direction.

Research Question 3 asked what team dynamics were beneficial and counterproductive to group innovation. Three interview questions were designed to answer the research question. The first question found that the ideal group size was five to 12 people and that team trust was a necessity for an effective session. The second question found that having a team that disagrees

more had a positive effect on the innovation process. The third question found that the two greatest impediments to a successful innovation session were not having a safe environment to share thoughts and having one person dominate the conversation.

Research Question 4 asked what facilitator behaviors were beneficial and counterproductive to group innovation. Three interview questions were designed to answer the research question. The first question found that the most used best practice to elicit innovation was to conduct activities that helped people to incorporate different perspectives. The second question found that the two main behaviors that facilitators needed to exhibit were being respectful toward the participants and maintaining neutrality throughout the process. The third question found that the most applied method of determining the success of the workshop was through gathering participant feedback.

Chapter Summary

This research used a qualitative research design with phenomenological approach conducted via semi-structured interviews. Data in the study were collected through the interviewing of 15 participants who had been selected through the snowball sampling approach. The data sources for this research were selected based on the population defined by the following two criteria: (a) facilitation of an innovation-dedicated event, and (b) facilitation of an event considered as successful and facilitation of an event considered a failure.

Data were then collected to address the original four research questions, which were later transcribed and subsequently coded. These codes developed into themes which were then analyzed. Research Question 1 asked what environmental factors were beneficial and counterproductive to group innovation and found that achieving leadership support was the key environmental factor. Research Question 2 asked what process designs were beneficial and

counterproductive to group innovation and found that innovation-enablement activities were the key process design aspect of developing an innovation-based workshop. Research Question 3 asked what team dynamics were beneficial and counterproductive to group innovation and found that team trust was the most beneficial team dynamic trait. Research Question 4 asked what facilitator behaviors were beneficial and counterproductive to group innovation and found that respect for the participant and maintaining neutrality were the top leadership behaviors that a facilitator should express.

Chapter 5: Discussion

Chapter Overview

In this chapter, the researcher will discuss the findings of the research conducted. This chapter begins with an introduction followed by a discussion of key findings, conclusions, and implications for society. The chapter concludes with suggestions for future research and an overall evaluation of the project. This work will conclude with an overall summary of the chapter.

Introduction

The purpose of this study was to determine the best practices exercised by facilitators to elicit greater innovation from a group of participants. This will be a key understanding for organizations aiming to stimulate innovation within their organization. The study intended to determine how facilitators measure success and their recommendations for future facilitators. This study was guided by four related research questions:

- What environmental factors are beneficial and counterproductive to group innovation?
- What process designs are beneficial and counterproductive to group innovation?
- What team dynamics are beneficial and counterproductive to group innovation?
- What facilitator behaviors are beneficial and counterproductive to group innovation?

Discussion of Key Findings

This research investigated common strategies and best practices, as well as challenges faced by facilitators of innovative thinking. Fifteen participants were selected through a snowball sampling method; 10 were male and five were female. The participants had over 377 years of facilitation experience, with an average of 25.1 years of facilitation experience. Of the participants, 40% worked in the private industry, 13% worked in the public industry, and 47%

worked in both industries. Participants represented diverse locations, with 47% residing in the western United States, 27% located in the central United States, and 13% from the northeast and south. The 15 participants identified 35 best practices.

- Applying Vision and Objectives: Establishing expectations provides the participants with the goal at the beginning of the session of what to accomplish and serves as a guide to the creative process.
- Conducting Empathy Training: Empathy training helps develop an ability in the participants to create for their customer.
- Establishing a Baseline Knowledge: Pre-work article reading or surveys help prepare participants to engage in active dialogue during the workshop.
- Feeling Safe and Secure: Idea-sharing safety is the ability for anyone to be able to express their thoughts without a fear of repercussions or judgment.
- Gauging Engagement: Pre-session interviews can help to gauge engagement and determine the most effective way to gain participant acceptance and commitment.
- Having Enthusiasm for Creativity: An enthusiastic culture of creativity triggers encouragement and motivation in participants.
- Prompting Participant Engagement: Pre-session interviews help to prompt the mind and prepare participants for engagement in an innovation session.
- Reading of Body Language: Positive body language can be determined at the beginning and during the event to understand the participants' level of engagement.
- Reducing Organizational Bureaucracy: Avoid a bureaucratic structure that restricts the flow of ideas throughout the organization; also avoid having levels of hierarchy during the innovation event.

- Rewarding of Risk Taking: Experimentation, acceptance of failure, and risk enablement shape an environment of experimenting for learning and growing.
- Supporting Leadership: Leadership should support participants by actively encouraging creativity and implementing the outcomes of the event.
- Applying Innovation Activities: Use innovation enablement-activities to help unlock pre-conceived notions and to open participants' minds toward understanding ambiguous thoughts.
- Capitalizing on Participant Specialties: Incorporate participants' background into the design to customize the experience toward individuals' specialties; this will elicit greater innovative thought.
- Clients Guiding of Disruption Level: Let the client guide the direction of the event. Are they able and willing to execute a disruptive change or can they only handle incremental change at that specific time?
- Continuous Activity Participation: Move people straight into activities; this drives a constant engagement with the participants.
- Designing Around Culture: Incorporate the culture and environment into the design to personalize the participant experience and increase receptiveness to the creative process.
- Logistics Enabling Creative Thought: Ensure the room set-up supports the event. Ensure that the logistics support the efforts of trust, safety, and energy.
- Personalizing of Session: Incorporate the area of focus into the design; outline what is to be accomplished while incorporating the known constraints.

- Assembling a Team with Diverse Backgrounds: Achieve team and domain diversity; creativity is improved by incorporating the ideas of people with different technical specialties and cognitive thought processes.
- Balancing Participation: Don't let one person dominate the discussion, as this will negatively impact the ability to gain the participation of all attendees.
- Being Vulnerable: Ensure a safe environment to share ideas so as to elicit the most ideas from the most people.
- Creating Team Transparency: Eliminate unspoken agendas to reduce idea creation friction and limitations.
- Debating of Ideas: Elicit debate and argument in the group to challenge the merits of ideas and to ensure a full perspective is taken.
- Ensuring Entire Team Participation: Keep the group size to under 12 people. Be sure the group is large enough so that different domains and technical experience are represented, but also small enough so that everyone will have an opportunity to participate.
- Placing Trust in the Process: Aim for team trust in the process and the facilitator; positive results occur when there is acceptance of the creative situation.
- Starting as an Individual and then as a Group: Gain everyone's participation by starting with individual work and then moving to small group work. This will allow everyone to contribute their thoughts, thus eliminating the potential for a strong voice to dominate the idea generation process.
- Supporting Outcomes: Aim for leadership support of the outcomes decided by the group to protect the participants' engagement in future sessions.

- Applying Feedback Measurements: Use participant feedback and achievement of objectives to measure event effectiveness; periodically check to determine the effectiveness of the process and to determine if mid-process adjustments are needed.
- Being Judgement Free: No one is ever wrong and do not judge ideas; the facilitator's goal is inclusive participation, which is achieved through neutrality.
- Creating a Fun Environment: Be playful as a facilitator to put the participants at ease and to enjoy their creative process which will, in turn, lead to greater creativity.
- Establish Expectations: Establish session expectations prior to the start of the event to institute behavioral protocols for the participants that are conducive to enabling innovation.
- Facilitator Verbatim Compliance: Do not paraphrase or summarize comments, as it creates the potential to discount or misconstrue the participants' intent.
- Giving Mutual Respect: Be respectful to the participants, as the goal of the facilitator is to enable participation from everyone, not just a select few.
- Maintaining Facilitator Neutrality: Maintain neutrality to ensure that everyone's voice and opinion is heard and of equal value.
- Maintaining Team Focus: Keep people engaged in activities to keep individuals from losing focus and shifting from deep innovative, exploratory thought to shallow executive, decision-based thought.

Facilitating Innovative Thinking Best Practices Determined Through Interviews	
What environmental factors are beneficial to group innovation	**What process designs are beneficial to group innovation**
Applying Vision and Objectives	Applying Innovation Activities
Conduct Empathy Training	Capitalizing on Participant Specialties
Establishing a Baseline Knowledge	Clients Guiding of Disruption Level
Feeling Safe and Secure	Continuous Activity Participation
Gauging Engagement	Designing Around Culture
Having Enthusiasm for Creativity	Logistics Enabling Creative Thought
Prompting Participant Engagement	Personalizing of Session
Reading of Body Language	
Reducing Organizational Bureaucracy	
Rewarding of Risk Taking	
Supporting Leadership	
What team dynamics are beneficial to group innovation	**What facilitator behaviors are beneficial to group innovation**
Assembling a Team with Diverse Backgrounds	Applying Feedback Measurements
Balancing Participation	Being Judgement Free
Being Vulnerable	Creating a Fun Environment
Creating Team Transparency	Establish Expectations
Debating of Ideas	Facilitator Verbatim Compliance
Ensuring Entire Team Participation	Giving Mutual Respect
Placing Trust in the Process	Maintaining Facilitator Neutrality
Starting as an Individual and Then as a Group	Maintaining Team Focus
Supporting Outcomes	

Figure 20. Interview-based best practices.

The overall finding from Research Question 1, which was about environmental factors that are beneficial and counterproductive to group innovation, was that leadership support is the most important element to the innovative environment of a workshop. By using pre-session meetings to determine the level of current leadership support, the facilitator was also able to gauge the engagement levels of the participants prior to the start of the session. The facilitator was also able to leverage this pre-session meeting with participants to focus their efforts on enabling greater innovation prior to the start of the workshop.

The overall takeaway from Research Question 2, which was about what process designs are beneficial and counterproductive to group innovation, was that pre-session meetings were key to understanding the culture and to designing an effective innovation workshop. This pre-session meeting is also essential to establish expectations with the participants and to determine

the participants' capacity level for disruption. Lastly, it provides insight into the design of the session and how to incorporate innovation-enablement activities.

The overall finding from Research Question 3, which was about what team dynamics are beneficial and counterproductive to group innovation, was that the participant group size should be between 5 and 12 people. Participants should come from a diverse technical skill or domain knowledge background and should have diverse cognitive processes. In addition, the interaction process should be designed to have participants generate ideas or brainstorm individually first; then, they should merge into groups to build upon their ideas. Lastly, after ideas are identified, a key goal would be to elicit debate to apply multiple perspectives to the ideas identified.

The overall takeaway from Research Question 4, which was about what facilitator behaviors are beneficial and counterproductive to group innovation, was that the key behaviors of the facilitator are to remain neutral and to be respectful of the participants. With this posture, the facilitator should aim to guide the group into looking at issues and solutions via multiple perspectives. Lastly, the facilitator should base their effectiveness on the feedback received from the group on if they met the overall workshop objectives (see Figure 21).

The significance of these findings is that there was a consistent application of common strategies and practices by practitioners. This study also found that there were wide gaps between academic and practitioner best practices. This work should add to the body of academia and provide detailed information for practitioners to incorporate into their practices.

Facilitating Innovative Thinking Comprehensive Best Practices	
What environmental factors are beneficial to group innovation	**What process designs are beneficial to group innovation**
Applying of Constraints (Caniëls and Rietzschel, 2013)	Achieving Deep, Focused Thought (Csikszentmihalyi, 1990)
Applying Vision and Objectives (Hesselbein & Cohen, 1999)	Applying Innovation Activities (Vartanian, 2013)
Challenging Culture (Dobni, 2008)	Applying Multiple Perspectives (Milliken, 2003)
Conduct Empathy Training	Building Rich Descriptions (Stasser and Birchmeier, 2003)
Connecting Unrelated Ideas (Smith, 2003)	Capitalizing on Participant Specialties
Continuously Learning (Bessant and Caffyn, 1997)	Clients Guiding of Disruption Level
Employing Temporal Landmarks (Nijstad, Diehl, & Strobe, 2003)	Conducting Thought Experiments (Cooper, 2005)
Establishing a Baseline Knowledge	Continuous Activity Participation (Fran Rees, 2005)
Feeling Safe and Secure (Stein, 1974)	Designing Around Culture (Brown, 2008)
Gauging Engagement	Logistics Enabling Creative Thought
Having Enthusiasm for Creativity	Observing the Work (Liker, 2004)
Prompting Participant Engagement	Personalizing of Session
Reading of Body Language	Practicing Reverse Thinking (Birsel, 2017)
Reducing Organizational Bureaucracy	Producing a Quantity of Ideas (Stein, 1974)
Rewarding of Risk Taking (Hennessey, 2003)	Prototyping Conceptual Ideas (Brown, 2008)
Scaffolding Ideas (Finke, Ward, & Smith,, 1992)	Revisiting of Previous Ideas (Stasser, 2003)
Supporting Leadership	Writing Creatively (Stasser and Birchmeier, 2003)
What team dynamics are beneficial to group innovation	**What facilitator behaviors are beneficial to group innovation**
Achieving Cognitive Diversity (Milliken, 2003)	Achieving Cognitive Dissonance (Ree, 2005)
Assembling a Team With Diverse Backgrounds (Milliken, 2003)	Applying Feedback Measurements
Balancing Participation	Being an Agile Learner (Brookfield, 1991)
Being Open to Experience (Nijstad et al., 2003)	Being Curious (Toledo-Pereyra, 2008)
Being Playful (West, 2003)	Being Judgement Free
Being Trusting (West, 2003)	Creating a Fun Environment
Being Vulnerable (West, 2003)	Establishing Expectations (Hesselbein & Cohen, 1999)
Creating Team Transparency	Facilitating with Excitement (Brookfield, 1991)
Debating of Ideas (Nemeth, 2003)	Facilitator Verbatim Compliance
Enabling Mental Tolerance (Nijstad et al., 2003)	Garnering Trust (Toledo-Pereyra, 2008)
Ensuring Entire Team Participation	Giving Mutual Respect
Placing Trust in the Process	Having Comfort with Ambiguity (Ree, 2005)
Rotating Team Members (Argote, 2003)	Holding the Participants Accountable (Stasser, 2003)
Starting as an Individual and Then as a Group (Stasser, 2003)	Maintaining Facilitator Neutrality
Supporting Outcomes	Maintaining Team Focus
Empathizing and Roleplaying Teams (Stasser, 2003)	Reversing Assumptions (Toledo-Pereyra, 2008)

Figure 21. Comprehensive best practices.

Conclusions

The first key conclusion is that this work defines the new term of facilitators of innovative thinking being an individual that enables creative thought in a group of participants in the areas of strategic planning, business development, and product conception. The second key conclusions of this study address the four research questions and help to identify that there is a

distinction between literature based insights and practitioner application. To further understand this phenomenon, the researcher analyzed the best practices derived via the literature review and through facilitator interviews using the lens of a Venn diagram (see Figure 22). This approach to evaluating the similarities of practices identified in both areas provides insight into the practices that are commonly shared and understood. Further research should be undertaken to determine if the practices that overlap hold greater value to the overall effectiveness of events.

Pertaining to the first research question on evaluating the intersections of common strategies in creating an innovative organizational environment, it was concluded that there were four practices that bridge both worlds. The first was identifying a vision, goal, or objective for the overall event. This harkens back to Hesselbein and Cohen's (1999) work that determined the application of a vision, strategic goals, and objectives provided a tangible target for people to strive for while having a vague direction to guide them (Hesselbein & Cohen, 1999). Next identified is having the ability to share ideas safely which corresponds with Stein's (1974) work which found that individuals need to feel safe and secure and not feel pressured or threatened, but more preferably relaxed and alert (Stein, 1974). Lastly, the culture should encourage experimentation, acceptance of failure, risk enablement, and enthusiasm for creativity to overcome challenges. This final intersection aligns with Dobni's 2008 work that found cultures which produced challenges to the workforce were found to be more innovative (Dobni, 2008).

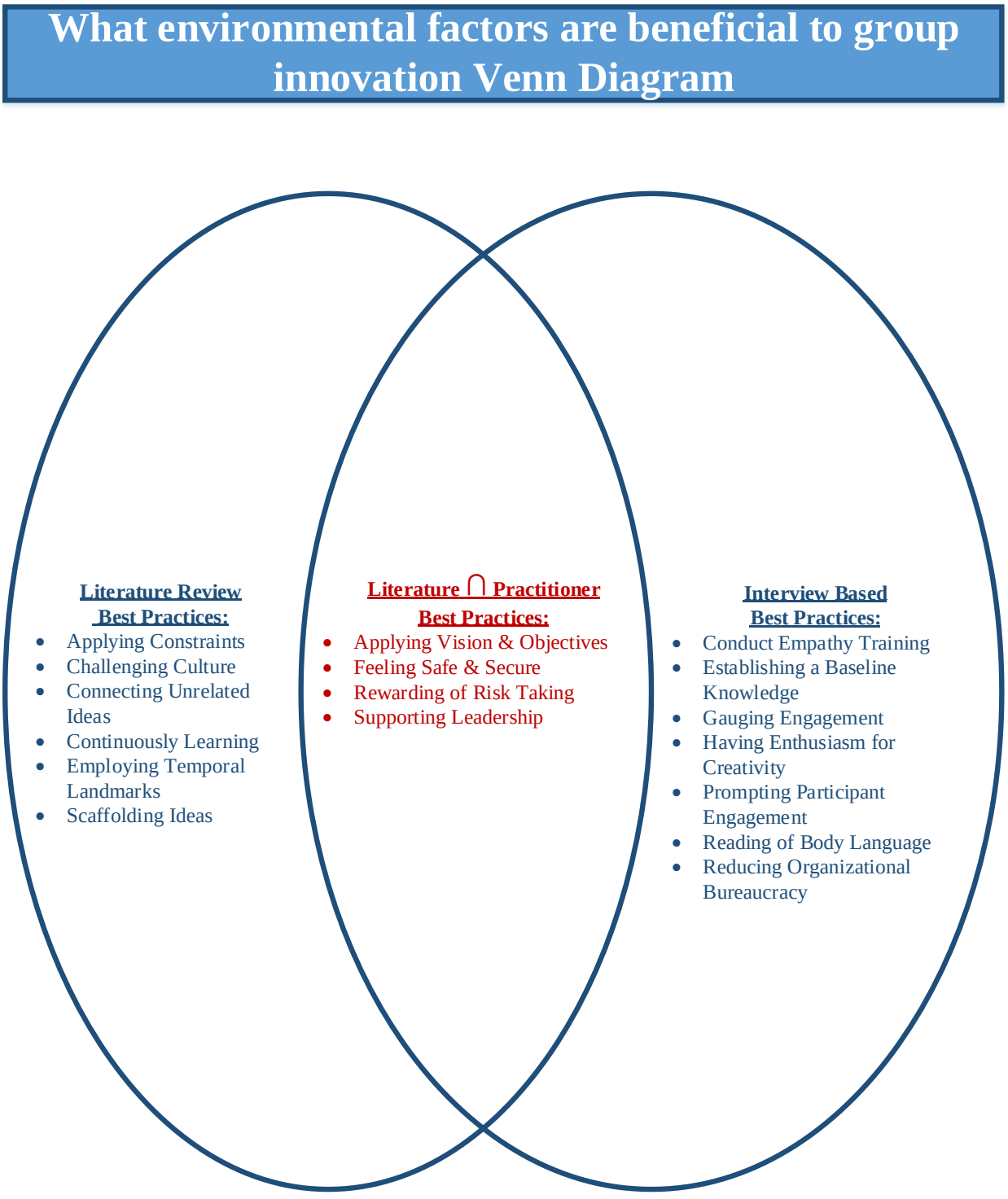

Figure 22. Environmental factors best practices Venn diagram.

Focusing on the second research question of evaluating the intersections of common strategies in creating a workshop process design, there were only two practices identified in both the literature and practitioner environments. The first and second were the continuous application of activities that helped participants to stretch their cognitive abilities to be able to process ambiguous concepts. While numerous creativity enhancing techniques were mentioned in the review of the literature, Vartanian (2013) confirms this with their conclusion that through training, individuals could become more adept at being creative (Vartanian, 2013). The last was designing the event to incorporate the overall purpose of the sessions into the event as well as the users' experiences (see Figure 23). This strongly aligns with Tim Brown's design model stage of empathetic understanding (Brown, 2008).

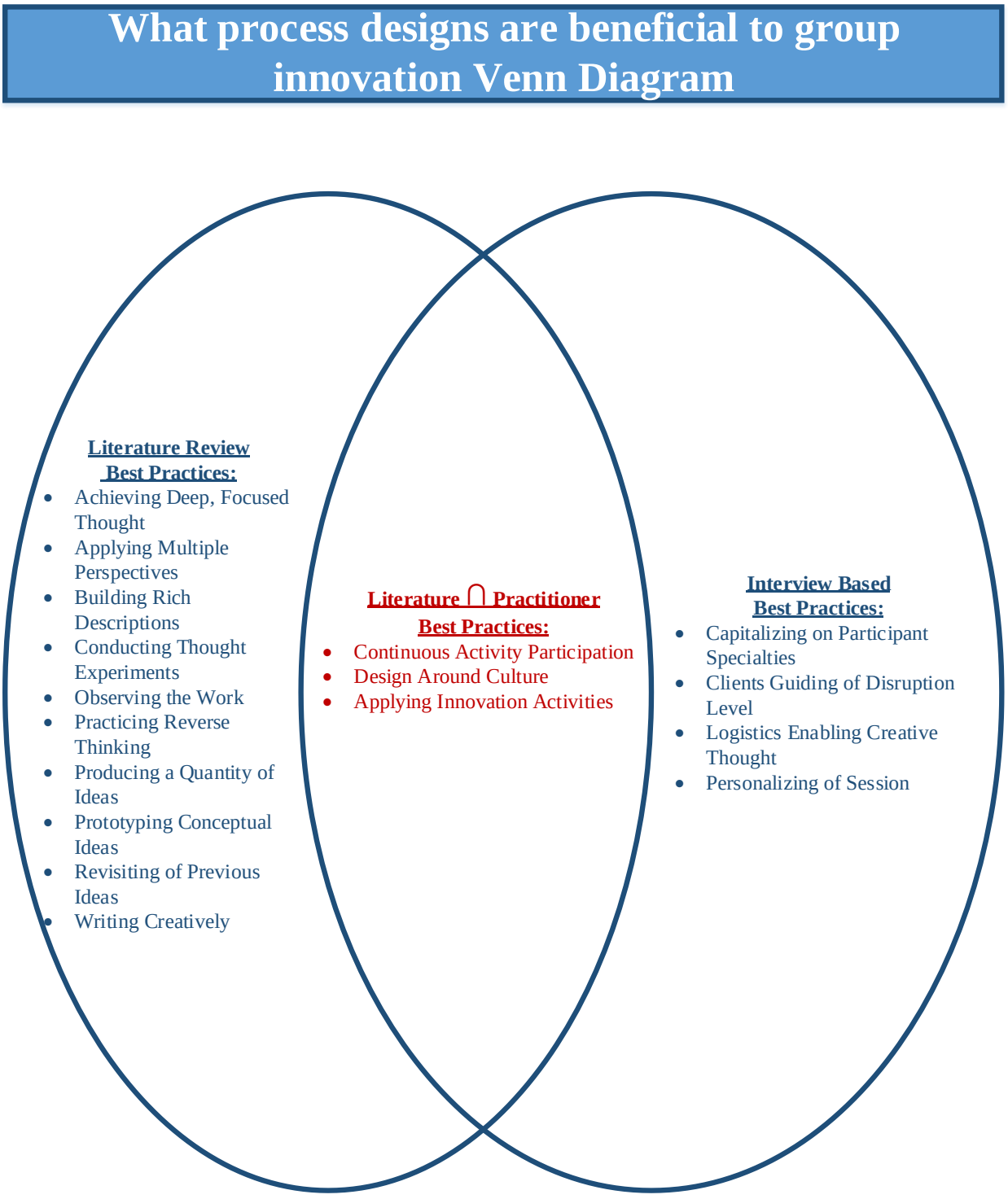

Figure 23. Process design best practices Venn diagram.

Addressing the third research question of evaluating the intersections of best practices focused on team dynamics there were only two practices identified in both the academic and practitioner environments. The first strategy focused on team diversity—having a variety of individuals with different specialties participate, and having participants who were cognitively diverse and had different mental approaches to work. This finding aligned to the findings in the literature review of achieving cognitive diversity to unlock hidden perspectives (Milliken, 2003). The second practice was to encourage candid debate on the topics identified; it is important to clarify that it is key to conduct debate only following the generation of ideas and not during the idea generation process (see Figure 24). This was reemphasized by Nemeth and Brown's (2003) finding that infusing debate sparks the cognitive processes to help achieve additional insight on an issue (Nemeth, 2003). The third practice of being vulnerable was central to West's (2003) work on the development of a team trusting on another. Lastly, the ability to start as an individual before moving into a larger group harkens back to Stasser's (2003) thoughts on having a number of differently oriented thinkers, that some process information better individually and by having a group start as individuals, their thought process is not stunted.

Figure 24. Team dynamics best practices Venn diagram.

Exploring the fourth research question of evaluating the intersections of common strategies pertaining to facilitator behaviors, there was only one practice identified in both the literature and practitioner environments. This was to establish participant expectations of the outcomes and encourage behaviors at the beginning of the event or even prior to it starting. Using this technique guides the participants toward the organizational objective (Hesselbein & Cohen, 1999) and creates the ability for the facilitator to hold the group accountable (Stasser, 2003).

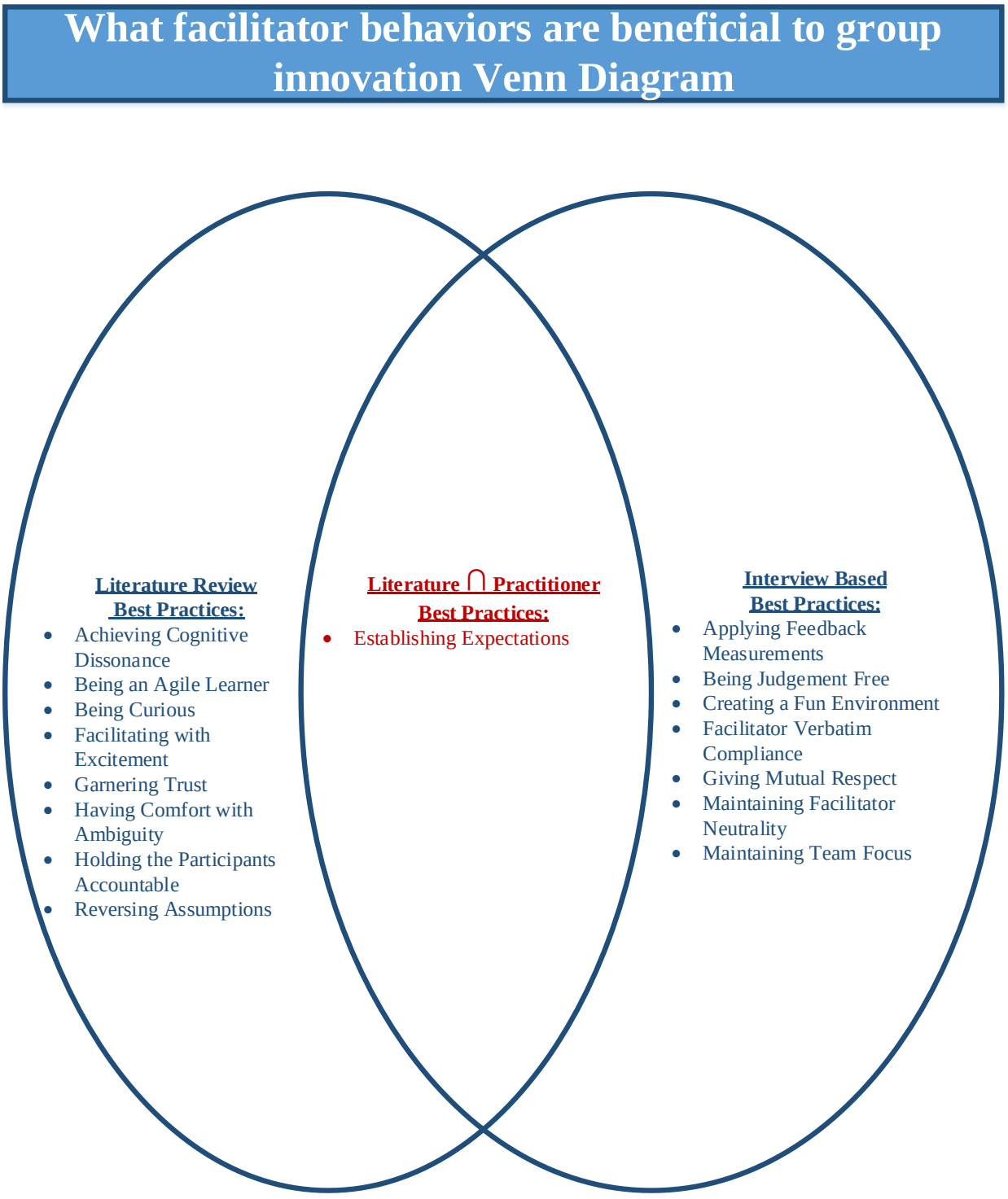

Figure 25. Facilitator behaviors best practices Venn diagram.

Reflecting on the overarching research question—What are the overall common strategies and practices of facilitators of innovative thinking?—the researcher would like to conclude with a finalized outline of best practices. This finalized list represents the intersection of common strategies identified by the Venn diagram modeling (see Figure 26). It was believed that this adds nuanced insight into the work of academia with facilitator practices; it helped to identify the gap that exists between both worlds. There are a number of possibilities as to why this gap does exist to include that linguistically the terminology may not have translated effectively between both spheres. However, it is the researcher's position that this field is still under-researched, that practices applied in the field still need to be added to academic literature, and that there are a number of literature determined practices that have not effectively transitioned into the field of practice. Identified below are the twelve best practices that intersected both the review of literature and practical application.

- Applying Vision and Objectives: Establishing expectations provides the participants with the goal at the beginning of the session of what to accomplish and serves as a guide to the creative process.
- Feeling Safe and Secure: Idea-sharing safety is the ability for anyone to be able to express their thoughts without a fear of repercussions or judgment.
- Rewarding of Risk Taking: Experimentation, acceptance of failure, and risk enablement shape an environment of experimenting for learning and growing.
- Supporting Leadership: Leadership should support participants by actively encouraging creativity and implementing the outcomes of the event.

- Applying Innovation Activities: Use innovation enablement-activities to help unlock pre-conceived notions and to open participants' minds toward understanding ambiguous thoughts.
- Continuous Activity Participation: Move people straight into activities; this drives a constant engagement with the participants.
- Designing Around Culture: Incorporate the culture and environment into the design to personalize the participant experience and increase receptiveness to the creative process.
- Assembling a Team with Diverse Backgrounds: Achieve team and domain diversity; creativity is improved by incorporating the ideas of people with different technical specialties and cognitive thought processes.
- Being Vulnerable: Ensure a safe environment to share ideas so as to elicit the most ideas from the most people.
- Debating of Ideas: Elicit debate and argument in the group to challenge the merits of ideas and to ensure a full perspective is taken.
- Starting as an Individual and then as a Group: Gain everyone's participation by starting with individual work and then moving to small group work. This will allow everyone to contribute their thoughts, thus eliminating the potential for a strong voice to dominate the idea generation process.
- Establishing Expectations: Establish session expectations prior to the start of the event to institute behavioral protocols for the participants that are conducive to enabling innovation.

Facilitating Innovative Thinking Intersection Best Practices	
What environmental factors are beneficial to group innovation	**What process designs are beneficial to group innovation**
Applying Vision & Objectives	Applying Innovation Activities
Feeling Safe & Secure	Continuous Activity Participation
Rewarding of Risk Taking	Design Around Culture
Supporting Leadership	
What team dynamics are beneficial to group innovation	**What facilitator behaviors are beneficial to group innovation**
Assembling a Team with Diverse Backgrounds	Establishing Expectations
Being Vulnerable	
Debating of Ideas	
Starting as an Individual and then as a Group	

Figure 26. Intersection best practices.

Implications for Policy and Practice

This study produced a number of implications for the advancement of the study of innovation. Specifically, this research identified common strategies for academic research and practitioner application. This study also produced a comprehensive list of best practices of innovation facilitators.

Implications for facilitators of innovative thinking are a collection of academic-based best practices that can then be applied in day-to-day applications. In addition, common strategies of active practitioners are identified along with the identification of a variety of tools that have been applied to elicit greater innovation. This creates the potential that this research could lead to greater facilitation among some practitioners, thus leading to greater future innovation.

While many question the means, few question the ends of the impact of innovation. A widely held belief connects the innovative gains with economic gains, leading each nation or organization to want to harbor not only the next great innovation but a repeated series of inventions. New innovations and markets create geographic gold rushes as industries and people try to capture market share, with the main economic benefactors being the city, region, and nation that originate the innovation policy. Naturally, nations and organizations strive to facilitate innovation and economic growth. This facilitation comes in many forms of policy in

efforts of cultural shaping. The policies come in the form of education and training, research and development funding, innovation prioritization, decreases in business regulation, and policy.

On a grander scale, this study has the potential to influence leadership and policy aiming to enhance national or organizational innovation. Findings indicated that leadership support of innovation is not strictly confined to innovation in a workshop but potentially stretches into the innovation experienced throughout the organization. This greater understanding of the impact of leadership, the behaviors to exhibit, and the shaping of an environment all have potential to be tested from an organizational and policy perspective.

Recommendations for Future Research

This research revealed future opportunities to explore facilitation of innovation in four specific areas. The first is that due to the extreme lack of overlap between practices identified in the literature and those items identified by practitioners, that additional research is needed to determine why that gap exists. There are a number of practices mentioned in the literature that is not being practiced and there are a number of practices that have yet to be documented. Secondly, the researcher feels that it is key to understand the importance of each common strategy. Which ones are more effective and how should they be prioritized? It would be insightful to conduct a multivariate analysis to understand if the application of a combination of best practices would have a greater impact on the enablement of innovation. Lastly, greater insight would be gained by conducting field observations in live workshops and in office locations to identify if there are similarities in eliciting innovative thought in a workshop and in day-to-day workplace activities.

Evaluation of the Methodology

This has been an interesting project in a number of facets. As creativity is heavily researched, the sheer mass of research that had been conducted made the initial selection of articles for the literature review difficult. Midway through the process, additional insight was discovered in the area of group innovation, which provided a breakthrough in determining the best practices. The key lesson learned was that it is necessary to continue the study and add to the literature review throughout the project lifecycle. Second, it was found that if the researcher is able to connect with the right individual with a highly developed professional network, that a snowball sampling method can speed up the participant identification process. It was also uncovered that during the interview process that by the duality of the questions to have the response be to identify the positives and negatives that the respondents typically would state only the positive or the negative and not the other. This consistently led to researcher prompting and should have been rephrased. Last, it was found that being able to leverage the dissertation committee as consultants helped to refine the research outcomes into a best practices grid model and Venn diagram, which clearly captured the intent of the research. While the original intent of the research was to develop a comprehensive list of best practices of facilitators of innovative thinking, the consultation of the committee brought to light an interesting element of this study that would compare both the findings from the literature review and practitioner identified common strategies. While the researcher was able to determine where the practices intersected, the relevance could not be determined from this study, but provides a succinct strategy for future research on if there is a greater importance for the best practices that have intersected.

Chapter Summary

The objective of this research was to provide facilitators of innovative thinking practical examples of common facilitation strategies and practices that were effective among facilitators. The research questions were restated, and the key findings of those research questions were discussed. Research Question 1 asked what environmental factors are beneficial and counterproductive to group innovation and found that achieving leadership support was the key environmental factor. Research Question 2 asked what process designs were beneficial and counterproductive to group innovation and found that innovation-enablement activities were the key process design aspect of developing an innovation-based workshop. Research Question 3 asked what team dynamics were beneficial and counterproductive to group innovation and found that team trust was the most beneficial team dynamic trait. Research Question 4 asked what facilitator behaviors were beneficial and counterproductive to group innovation and found that respect of the participant and maintaining neutrality were the top leadership behaviors that a facilitator can express. This chapter concluded with recommendations for future research and an evaluation of the research project.

This investigation is an exploration of environments that promote or prevent innovation. There is a degree of overlap between the list of practices identified in the literature and practices employed by practitioners in the field. A number of questions arise as a result of this research:

- Why do facilitators employ certain strategies in the field (‘right wing’ of Venn diagram)?
- How do facilitators select strategies from the literature (‘intersection’ of Venn diagram)?
- Why do facilitators not apply strategies in the literature (‘left wing’ of Venn diagram)?

From this study, it is clear that twelve key strategies are necessary and used consistently in the facilitation of activities to promote innovative thinking:

- Identifying a vision, goal, or objective;
- Establishing guidelines for participation;
- Creating a safe environment and culture;
- Maintaining focus and engagement;
- Responding sensitively to experimentation, risk, and failure;
- Sharing moments of creativity and challenge;
- Allowing for ambiguity in the cognitive process;
- Designing purposeful and relevant activities;
- Including participants with diverse skill sets;
- Acknowledging diverse approaches to working life;
- Encouraging candid discussion;
- Avoiding judgment by the facilitator.

These strategies are scalable to everyday activities in many organizations because they can be adapted and applied within a variety of contexts for the facilitation of innovative thinking.

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APPENDIX A

Additional Tables and Figures

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APPENDIX B

Informed Consent

PEPPERDINE UNIVERSITY

Graduate School of Education and Psychology

INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES

Common Strategies and Practices among Facilitators of Innovative Thinking in Organizations

You are invited to participate in a research study conducted Mr. Matthew D.M. Watson, a doctoral student at Pepperdine University and faculty advisor Dr. Martine Jago, Ph.D. You have been carefully selected because of your classification as a facilitator of innovative thinking based on inclusion criteria. Your participation is voluntary. You should read the information below, and ask questions about anything that you do not understand, before deciding whether to participate. Please take as much time as you need to read the consent form. You may also decide to discuss participation with your family or friends. If you decide to participate, you will be asked to sign this form. You will also be given a copy of this form for your records.

PURPOSE OF THE STUDY

The purpose of the study is to determine the best practices employed, and challenges faced, by innovation facilitators to elicit greater innovation. In addition, the study will determine how facilitators measure success, and what recommendations they would have for future facilitators.

STUDY PROCEDURES

If you volunteer to participate in this study, you will be asked to participate in an approximately 60 min interview.

The following interview protocol will be used:

Characteristics of Innovation Facilitators
Interview Protocol

Introduction: Tell me about your career

1. What are some organizational culture factors that you've noticed that help or hinder the process? Why?
2. Prior to any session, what prepares people to engage in innovative brainstorming and ideation?
3. How do you gauge the mood of the participants if they will be easier or harder to obtain participation?

4. When you design an event to elicit innovative thought what are the key elements that you include? Why?
5. What do you take into account prior to designing the event? Why?
6. How do you balance incremental change with the concept of disruption?
7. Is there an ideal group size for innovation? And, what team dynamics do you believe have an impact on the overall event? Why?
8. Having a group that disagrees more, do you think are more or less innovative? Why? And are there built-in allowances for mistakes?
9. What gets in the way of fostering innovation in a facilitated work session?
10. What are your best practices for stimulating innovation?
11. Are there any behaviors that you would emphasize or not display towards participants? Why?
12. How do you judge if you've been successful or not at the end of the event? Do you measure the quality of people's ideas or the event in general?

POTENTIAL RISKS AND DISCOMFORTS

Potentials risks may include the following: issues pertaining to one's professional reputation, boredom, and fatigue as a result of participation are also relevant.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

While there are no direct benefits to the study participants, there are several anticipated benefits to society which include:
The compilation of results of the study will be beneficial to the learning and practitioner communities at large.

1. Findings of the study will shed light and inform scholars and practitioners on the inclusion of underrepresented groups in innovation events.

In addition, upon your request, a completed copy of this study will be provided to you.

CONFIDENTIALITY

I will keep your records for this study *confidential* as far as permitted by law. However, if I am required to do so by law, I may be required to disclose information collected about you. Examples of the types of issues that would require me to break confidentiality are if you tell me about instances of child abuse and elder abuse. Pepperdine's University's Human Subjects Protection Program (HSPP) may also access the data collected. The HSPP occasionally reviews and monitors research studies to protect the rights and welfare of research subjects.

The data will be stored on a password-protected computer in the principal investigator's place of residence. The data will be stored for a minimum of three years. The data collected will be coded and de-identified. Any identifiable information obtained in connection with this study will remain confidential and will be destroyed upon completion of the study. Your responses will be coded with a pseudonym and transcript data will be maintained separately. The audio-tapes will be destroyed once they have been transcribed and the participant will have the right to review and edit the audio transcript upon request.

PARTICIPATION AND WITHDRAWAL

Your participation is voluntary. Your refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

ALTERNATIVES TO FULL PARTICIPATION

The alternative to participation in the study is not participating or completing only the items which you feel comfortable.

EMERGENCY CARE AND COMPENSATION FOR INJURY

If you are injured as a direct result of research procedures you will receive medical treatment; however, you or your insurance will be responsible for the cost. Pepperdine University does not provide any monetary compensation for injury

INVESTIGATOR'S CONTACT INFORMATION

I understand that the investigator is willing to answer any inquiries I may have concerning the research herein described. I understand that I may contact Mr. Matthew Watson at (208) 881-3996 or Dr. Martine Jago (949) 701-6374 if I have any other questions or concerns about this research. If you have questions about your rights as a research participant, contact Dr. Judy Ho, Chairperson of the Graduate & Professional School Institutional Review Board (GPS IRB) at Pepperdine University, via email at gpsirb@pepperdine.edu or at 310-568-5759.

RIGHTS OF RESEARCH PARTICIPANT – IRB CONTACT INFORMATION

If you have questions, concerns or complaints about your rights as a research participant or research, in general, please contact Dr. Judy Ho, Chairperson of the Graduate & Professional Schools Institutional Review Board at Pepperdine University 6100 Center Drive Suite 500 Los Angeles, CA 90045, 310-568-5753 or gpsirb@pepperdine.edu.

SIGNATURE OF RESEARCH PARTICIPANT

I have read the information provided above. I have been given a chance to ask questions. My questions have been answered to my satisfaction and I agree to participate in this study. I have been given a copy of this form.

AUDIO/VIDEO/PHOTOGRAPHS

□ *I agree to be audio-recorded*

□ *I do not want to be audio-recorded*

_____

Name of Participant

_____ _____

Signature of Participant Date

SIGNATURE OF INVESTIGATOR

I have explained the research to the participants and answered all of his/her questions. In my judgment, the participants are knowing, willingly and intelligently agreeing to participate in this study. They have the legal capacity to give informed consent to participate in this research study and all of the various components. They also have been informed participation is voluntary and that they may discontinue their participation in the study at any time, for any reason.

_____

Name of Person Obtaining Consent

_____ _____

Signature of Person Obtaining Consent Date

APPENDIX C

Sample Invitation

Dear (Participant name),

You have been invited to participate in a voluntary study in association with the Global Leadership and Change program at Pepperdine University's Graduate School of Education and Psychology. This study is focused on best practices of facilitators of innovative thinking.

Participation in the study is voluntary and confidentiality are maintained to your satisfaction. Participation entails a maximum of a 60-minute long interview. The questions that will be asked in the interview and the informed consent form are attached to this communication. Please review this in advance of the interview. Your participation in this study will be extremely valuable to new, current, and aspiring facilitators in business, as well as other scholars and practitioners in the field.

Please respond to this message if you are willing to be interviewed as part of this study.

Sincerely,

Matt Watson

APPENDIX D

IRB Approval Letter

PEPPERDINE

Pepperdine University
24255 Pacific Coast Highway
Malibu, CA 90263
TEL: 310-506-4000

NOTICE OF APPROVAL FOR HUMAN RESEARCH

Date: February 26, 2018

Protocol Investigator Name: Matthew Watson

Protocol #: 17-12-693

Project Title: COMMON STRATEGIES AND PRACTICES AMONG FACILITATORS OF INNOVATION

School: Graduate School of Education and Psychology

Dear Matthew Watson:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at community.pepperdine.edu/irb.

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chair

APPENDIX E

Instrumentation Interview Questions

Introduction: Tell me about your career?

1. What are some organizational culture factors that you've noticed that help or hinder the process? Why?
2. Prior to any session, what prepares people to engage in innovative brainstorming and ideation?
3. How do you gauge the mood of the participants if they will be easier or harder to obtain participation?
4. When you design an event to elicit innovative thought what are the key elements that you include? Why?
5. What do you take into account prior to designing the event? Why?
6. How do you balance incremental change with the concept of disruption?
7. Is there an ideal group size for innovation? And, what team dynamics do you believe have an impact on the overall event? Why?
8. Having a group that disagrees more, do you think are more or less innovative? Why? And, are there built-in allowances for mistakes?
9. What gets in the way of fostering innovation in a facilitated work session?
10. What are your best practices for stimulating innovation?
11. Are there any behaviors that you would emphasize or not display towards participants? Why?
12. How do you judge if you've been successful or not at the end of the event? Do you measure the quality of people's ideas or the event in general

APPENDIX F

Interview Themes

Participant Themes		Key Theme	Secondary Theme	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
What environmental factors are beneficial and counterproductive to group innovation?	1. What are some organizational culture factors that you've noticed that help or hinder the process? Why?	1. Leadership Support (6) 2. Not Having a Bureaucratic Structure (5)	1. Experimentation, Accept Failure & Risk Enablement (5) 2. Idea Sharing Safety (5) 3. Enthusiastic Culture of Creativity (3)	1. (+) Loving to help each other 2. (+) Growth Mindset 3. (+) Problem solving 4. (+) Collaborate Well Together 5. (-) Focus on running day to day operations 6. (-) Anxiety 7. (-) Focus on driving efficiency 8. (-) Geographically dispersed 9. (-) Lack of cultural diversity	1. (+) Willingness to accept failure 2. (+) Learning environment 3. (+) Enabled risk taking 4. (+) Encouraging to pursue different ideas 5. (-) Risk Adversity	1. (+) Established Mission & Goals 2. (+) Culture of mass ideas	1. (+) Positive senior leadership involvement 2. (-) Negative senior leadership involvement	1. (+) Exploration 2. (+) Facilitative leadership 3. (-) Managerial control 4. (-) Traditional problem solvers always looking for the one right answer 5. (-) Time pressure 6. (-) Authoritarian pressure 7. (+) Enthusiastic about innovation 8. (-) Unsupportive managerial behaviors	1. (+) Open to experimentation 2. (+) Encouragement of trading ideas and debating 3. (-) Punitive for missing goals 4. (-) Frantic people always fighting fires	1. (+) Culture of Creativity, Innovation, & Brainstorming	1. (+) Promotion of free thinking (+) Learning from failure, fail fast, fail cheep 3. (-) Low risk	1.(+) Freedom for organizational hope 2. (-) Command and Control organizations 3. (-) People that have been hired to do rather than think	1. (+) Feeling safe	1. (+) Positive senior leadership 2. (-) Hierarchical organization 3. (-) Leadership disregard / squashing ideas	1. (+) Appetite for innovation 2. (-) Bureaucracy	1. (+) People in love with the mission 2. (-) Hierarchy 3. (-) Risk adverse 4. (-) Fear	1. (+) Leadership support & encouragement 2. (-) That won't work 3. (-) Negative leadership / lack of support	1. (+) Organization genuinely interested in what the people have to say 2. (+) Assuming that each person has something to contribute 3. (+) Managers seeking input from associates to encourage that spirit of innovation
	2. Prior to any session, what prepares people to engage in innovative brainstorming and ideation?	1. Pre-Session Interviews (6) 2. Pre-Work Article Reading or Surveys (6) 3. Establish Session Expectations (4)	1. Empathy Training (2)	1. Give an area to focus on 2. Industry statistics 3. Trends	1. Expectations 2. Prompt of ready to innovate	1. Primer of the topic and structure, & possible thoughts on the topic	1. Questionnaire to get them thinking on the topic	1. Set-up to encourage empathy prior to coming into the event	1. Pre-interviews with the participants on what they want to accomplish	1. Article to prompt thought 2. 2-year vision imagination session for rumination	1. Crafting questions beforehand to stimulate thought	1. Pre-questions to think on 2. What do we want to accomplish	1. Pre-session interviews to frame the conversation	1. Pre-interview to understand the desired results	1. Pre-session interviews to understand the organization and their expectations	1. Empathy interviews / exercises	1. Pre-session interviews 2. Pre-surveys	1. Pre-interviews for session expectations & purpose
	3. How do you gauge the mood of the participants if they will be easier or harder to obtain participation?	1.Pre-Session Interviews to Gauge Engagement (5) 2. Reading Body Language (5)	1. Move the people straight into an activity (2) 2. Do nothing as to not pass a pre-judgement (2)	1. Move participants directly into activity 2. (-) Using technology 3. Body Language	1. Body Language	1. Deciphering engaged & skeptical	1. Body language 2. Soft start for meet & greet (Pre-Session Interviews)	1. Pre-Session Interviews	1. Pre-Session Interviews	1. Body Language 2. (-) Using Technology	1. Pre-Session Meeting & Questionnaire	1. Nothing, I try to withhold judgement	1. Reading the newspaper 2. Using Technology	1. Nothing, I try to withhold judgement	1. Pre-session interviews	1. Move participants directly into activity	1. Move participants directly into activity	1. Body Language

Participant Themes		Key Theme	Secondary Theme	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
What process designs are beneficial and counterproductive to group innovation?	4. When you design an event to elicit innovative thought what are the key elements that you include? Why?	1. Innovation enablement specific activities (7) 2. Establishment of Expectations to Start (5)	1. Room Set-Up & Logistics (3)	1. Physical Spacing 2. Sunlight Accessibility 3. Music 4. Shock to disrupt routine 5. Activities	1. Establish objectives 2. Scope control	1. Identify what is possible 2. Timeline activities 3. Visioning activities 4. Facilities to elicit full group participation	1. Training or video to set the mood	1. Setting expectations & goals	1. Goal establishment 2. Barrier breakdowns 3. Puzzle solving activities	1. Developing a juicy vision of the possible future	1. Individual reflection time 2. Activity to get out of a predefined boundary	1. Activities to engage the group	1. Walk through the agenda	1. Designed conversations 2. Goal establishment 3. Exploration of meaning 4. Individual brainstorming 5. Small group work	1. Parking lot items 2. Meeting protocols & ground rules 3. Informational / purpose to kickoff 4. Q & A Session 5. Breakout sessions 6. Overview of industry spawned innovations	1. Physical space set up 2. Small pods 3. Focused conversations 4. Using data to evoke emotions	1. Design of the workshop to resemble a plotline 2. Start with situational analysis on the current state 3. 5 Year vision exercise	1. Exercises to shake up creativity 2. Problem framing & reframing 3. Physical environment set-up 4. Use quotes on creativity 5. Music 6. Mind puzzles for exercises
	5. What do you take into account prior to designing the event? Why?	1. Understanding of the Culture & Environment (8) 2. Research into the workshop's specific area of focus (6)	1. Location & Time Specifics (5) 2. Background of the Participants (4)	1. Get background of the participants 2. Research the knowledge matter of the main topic 3. Training needs of the participants	1. Get background of the participants 2. Understand the various perspectives 3. Understand the key problem	1. Understand the key problem and if it is process or performance based	1. Topic understanding 2. Diversity of Participants 3. Location specifics	1. Understand the factors that would derail the objective 2. Level of maturity in the exploration process	1. Time limitations 2. What's going on outside of the workshop 3. Location specifics	1. Prompting to think about the future 2. Participants' background with this type of activity	1. Understanding the outputs of the objective 2. Scope clarification 3. Finding the right participants 4. Time length	1. Walk through every bit of the agenda 2. Location specifics	1. Thinking about what we haven't thought about	1. Understand how to make it a safe environment	1. Understand the situation & self-assessment of the organization 2. Research the company's goals & values & news about them	1. Understanding of what you want people to walk away with experiential 2. Understand if their culture jumps to solutions 3. Current constraints	1. Current major challenges 2. Level of organizational trust 3. Size of the group 4. Time allotted 5. Location specifics	1. Research on the organization on what their situation is 2. Understanding of the participant expectations
	6. How do you balance incremental change with the concept of disruption?	1. Let the client guide the direction (6)	1. Will help push the client for impactful change (3) 2. Lead the client towards incremental change to achieve tangible benefits (3)	1. I'm there to specifically cause disruption but I balance their program management impacts and what they can tolerate	1. It is a balance between their organizational capabilities, timelines, and budgets. These are all variables to consider.	1. You are there to help them figure out where they need to go between incremental and disruption	1. Incrementally you get more bang for the buck and momentum	1. Did not answer the question	1. I follow what they want	1. I press for if there choices will make a difference and will they be high leverage moves	1. I stay purely neutral and the client decides where to go. Listening to the sponsor I will pick on their clues of how far to push.	1. Look to create incremental gains	1. I will push if what they are determining is sufficient, but if we push beyond where the client wants to go, we have broken our code	1. I don't consider it and go to where the clients want to go	1. I will attend to what they are telling me and if that is different from what they need. My allegiance is to their outcome and I will gauge how much change or disruption they can tolerate	1. I believe small changes can make a big difference but I will pay attention to how much the group can tolerate	1. I prefer the vision exercises to identify the disruptive changes, but I want it to be ground in reality	1. I'm not there to make the decision of incremental or disruptive but to help them get to where they want to go

Participant Themes		Key Theme	Secondary Theme	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
What team dynamics are beneficial and counterproductive to group innovation?	7. Is there an ideal group size for innovation? And what team dynamics do you believe have an impact on the overall event? Why?	1. 5 to 12 People (11) 2. Team Trust (6)	1. Team & Domain Diversity (3)	1. 12 2. Close in proximity	1. 5 to 10 2. Different perspectives 3. Different domain expertise 4. People allowed to voice their ideas 5. No belittling 6. No shutting down of people	1. 12 to 15	1. 8 to 10 2. Cross-section of different people	1. 10 to 12 to 15	1. <20 2. Depends upon how people are getting along 3. Culture encourages bazar behavior, thinking out of the box	1. 12 to 16 2. People won't collaborate with people they hate	1. 10 to 12 to 15 2. Freedom to participate in an open and safe manner	1. 7 to 12	1. No ideal size 2. Leadership has to understand the problem and is committed to changing it	1. 16 to 20 2. Negative to prioritize people's ideas applauding some and denigrating others	1. 7 to 12	1. 5 to 10 2. Diversity 3. Trusted partnerships	1. 7 to 8	1. No ideal size 2. Ability to meaningfully share 3. Build on other's ideas
	8. Having a group that disagrees more, do you think are more or less innovative? Why? And are there built-in allowances for mistakes?	1. Has a positive effect (9)	1. No effect (2) 2. Can be good or bad (2)	1. It has no effect	1. It forces discussion and provides more depth	1. Depends, it could be the positive of multiple ideas or personnel issues	1. Helps because it adds different perspectives	1. It is a cultural component in some situations that can either validate or derail the process	1. More innovative if done correctly	1. No effect, it depends upon the people participating	1. Yes, healthy dialogue helps explore all options	1. Love pressure debate	1. Yes, it is healthy	1. Yes, attributes to multiple perspectives	1. Not sure	1. Yes, more diversity, more ideas, more debate	1. You want someone to challenge the obvious	1. It does not promote creativity
	9. What gets in the way of fostering innovation in a facilitated work session?	1. Not having a safe environment to share thoughts (7) 2. Having 1-person dominate the conversation (5)	1. Lack of Leadership Support (4) 2. Unspoken Agendas (2)	1. External arguments 2. Leader taking over he meeting 3. Top down comments 4. Back stabbing 5. Too much pressure	1. One person taking over the conversation	1. One person taking over the conversation 2. Mixing senior & junior levels 3. Not trusting the process	1. Putting down other ideas 2. One person taking over the conversation	1. If one person decides to derail the conversation	1. Unsupportive senior leadership 2. No follow through on previous initiatives	1. Not safe to speak up or to be wrong	1. Not safe to speak up 2. Bullies in the room 3. Inauthenticity	1. Unspoken agenda 2. Game playing 3. people feeling attacked	1. Leaders having their own personal agenda	1. I can't think of anything	1. Over-worrying about the client instead of the process 2. Stale & outdated meeting rooms	1. Did not answer the question	1. People saying that we've tried that before	1. We've tried that before 2. That will never get approved

Participant Themes		Key Theme	Secondary Theme	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
What facilitator behaviors are beneficial and counterproductive to group innovation?	10. What are your best practices for stimulating innovation?	1. Activities to get people to incorporate different perspectives (9)	1. Starting as an individual and incorporating small groups (2) 2. Creating an environment to safely share ideas (2)	1. Focus on setting up the room & Materials 2. Being more gregarious& being entertaining 3. Using music 4. Getting people to move around 5. Meeting people at their eye line	1. Create a structured environment 2. Use sticky notes to jot down ideas & discuss them 3. Capture everyone's perspective	1. Nothing noted	1. Start with a team building event or little brainstorming session not related to the event 2. Use an object & have them identify everything they can do with it	1. Giving 30 seconds to come up with a maximum of ideas 2. Power of 10 exercise of zooming in and out to gain perspective	1. Using various exercises or mind puzzles that are tied into the overall event 2. Draw me a picture, now turn that picture into words	1. Create a condition where people want to contribute 2. Have a context that's compelling & interesting which people want to build on	1. Be authentic 2. Create a safe space for self expression without a fear of retribution 2. Provide transparency for what the outcomes will mean for the company 3. Maintain open to exploration instead of shutting people down	1. Asking question & having them record their answers	1. Get people to face the problem 2. Perform a walking process map 3. Role playing & scenarios that demonstrate the problem	1. Using a table centerpiece to open questions on the topic 2. Using pipe cleaners & building toys to engage kinesthetic learners	1. Being transgressive 2. Participants to draw pictures 3. Enabling the breaking of rules	1. Working as an individual before then as groups 2. Break people into small groups 3. Exercises to practice empathy	1. Don't reuse facilitation techniques as it will lose effectiveness 2. Use photographs to paint a vision	1. Have participant use improvisational exercises to achieve different perspectives
	11. Are there any behaviors that you would emphasize or not display towards participants? Why?	1. Be respectful (5) 2. Maintain neutrality (5)	1. Create a relaxed & playful environment (4) 2. No one is ever wrong (4) 3. Do not paraphrase or summarize comments (2)	1 No one is ever wrong 2. Write down all ideas 3. Do not summarize comments 4. Don't joke that would hint at belittling an individual	1. Get people to feel comfortable 2. Emphasize the solicitation of ideas 3. Listen & acknowledge each idea	1. Be invested in the facilitation process 2. Stay even keeled 3. Ensure no one dominates the conversations 4. Ensure everyone is participating	1. Maintaining independence	1. Maintaining neutrality & not showing excitement 2. Not to critique behavior but keeping them engaged 3. Create a coaching environment	1. Be respectful of the participants 2. Make it relaxed & enjoyable	1. Look for centers of gravity that align the group 2. Don't focus on what they don't like but reinforce what they do like	1. Don't show favoritism, befriending some & ignoring others 2. Be inclusive 3. Be neutral 4. Challenge them without threatening them	1. Always have them thinking forward & innovatively 2. Bring a level of excitement 3. Emphasize empathy	1. Don't show disapproval 2. Be present & curious 3. Be intentional	1. Curiosity 2. Playfulness	1. Don't be a fetch 2. Don't suck up to the client 3. Don't be a rebel rouser 4. Be neutral	1. Don't paraphrase people 2. Don't give feedback of a judgmental type "good idea"	1. Create an environment of trust 2. Be transparent & invisible in the groups accomplishments	1. Model behaviors that encourage participation, wild ideas, & creative thinking 2. Have fun
	12. How do you judge if you've been successful or not at the end of the event? Do you measure the quality of people's ideas or the event in general?	1. Participant feedback (11)	1. Achieving workshop expectations identified prior to it beginning (5)	1. They ask for a question and you see if you can answer that question 2. Patent party measurement	1. Did you achieve the goals of the session	1. Participant feedback	1. Attitude coming out of the event 2. Participant feedback 3. Follow up survey	1. Quality of discussions 2. Participant feedback if they are charged or demotivated	1. Participant happiness level 2. Did they take ownership of the outcomes	1. Participant feedback on if they felt their ideas can make the difference that they wanted to achieve	1. Participant feedback during designed checkpoints	1. Meeting start objectives attainment 2. Participant feedback on a valuable use of time	1. Plusses & Deltas 2. Do not measure quality of ideas	1. Participant feedback on satisfaction	1. 1. Plusses & deltas 2. Follow up debrief a few weeks later	1. End of meeting reflection 2. End of meeting commitments made 3. Energy level at the conclusion	1. Follow up later of did anything change & did they implement the plan	1. Do the people think they did it themselves 2. Did they implement the plan