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Pepperdine University
Graduate School of Education and Psychology

EXPLORATION OF MIND MAPPING AS AN ORGANIZATIONAL CHANGE TOOL

A dissertation submitted in partial satisfaction
of the requirements for the degree of
Doctor of Education in Organizational Leadership

by

Brenda G. Wilson

April, 2016

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DOCTOR OF EDUCATION

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DEDICATION

I dedicate this dissertation to three of the most important individuals in my life, my mom Deanna Wilson, dad, Jerry Pierce Wilson, and step-dad Jerry Lee Wilson. I admire the incredible degree of love, dedication, self-sacrifice, and tenacity of each.

Although my dad, Jerry Pierce Wilson, passed away over 40 years ago, I remember the time he spent driving from Bartlesville to Tulsa to complete his degree. I also recall the pride our family felt for him and his accomplishment.

Jerry Lee Wilson entered my life when I was an adult, marrying my mom after a lengthy courtship. He treated me and my siblings as if we were his own. His confidence in me, his history of overcoming obstacles, and his ultimate success provided me with the same. This journey would have been impossible without his help.

Finally, and most importantly, my mom, Deanna Wilson, for creating such committed relationships during two very different times in her life. Although we often joked that she did not understand my passion to take this journey, she never stopped showering me with love and calm confidence.

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ABSTRACT

Mind mapping is a communication tool that has been around for decades though it is rarely discussed as a tool for facilitating organizational change. It is possible for this underutilized communication tool and the ever-present challenge of organizational change to work in harmony on a more consistent basis. This exploratory research asked Change Leaders and Change Participants about their current mind mapping usage or experience, and requested their input on the use of mind mapping for organizational change efforts. There were 76 Change Leaders and 11 others who self-described themselves as Change Participants who responded to a virtual data collection process. Overall change readiness levels were predominantly at the moderate level, 37% of Change Leaders and 45% of Change Participants, an encouraging statistic for organizations considering change. Respondents reported that mind mapping is mostly used as a personal tool for organization, planning events, setting goals, and writing papers. Change Leaders ($n=20$) who reported using mind mapping professionally, commented they used it primarily for communication and collaboration, and project and systems planning and design. Specific practices included coaching, clarifying objectives, evaluating and monitoring projects, assessing lessons learned, redesigning curriculum, realigning resources, setting expectations, objectives and goals, and establishing timelines. One study conclusion was that these change practitioners understood how change is inevitable, and indicated their willingness to actively participate. This makes it important for organizations to capitalize on change participants' knowledge and enthusiasm to enable successful change and enhance employee well-being. Concluding that attitudes, behaviors, and feelings toward change vary based on the role one plays, Change Leaders can benefit from the efforts of Change Participants by simply respecting their role and knowledge and involving them in the entire process, from planning to implementation. It is a foregone conclusion that communication is essential for any change process regardless of what specific tool is used, but the importance of selecting an appropriate method(s) based on the situation, message, and the recipients is critical. Using mind mapping as

a change management tool specifically designed for certain aspects of organizational change is highly recommended, as it allows for both linear and non-linear communication.

Keywords: mind mapping, organizational change, Organizational Change Readiness Assessment, OCRA, visual communication

Chapter 1: Introduction to the Study

Introduction

Organizational change is hard. The reasons for organizational change are seemingly endless. Change can be due to an alteration in strategy, the introduction of new technology, a merger, or the actions of a competitor (Fishman, 1997), to name a few. Organizational change has become the only constant in the 21st century business landscape, and regardless of the details, the effect of a change initiative has the power to transcend every department, job, task, and most importantly person, regardless of the overall plan. While strategy or operational change is critical to the longevity of organization, the key to execution is people (Haudan, 2007).

Dozens of change models exist and have given Change Leaders excellent guidelines, frameworks, processes, and innovative solutions for successful change, nonetheless, many change efforts fail. There are numerous reasons change has a dismal track record. A few of the challenges commonly present are poor communication, lack of understanding, not accounting for details, successes, failures, and challenges. Studies by Ernst and Young (as cited in Haudan, 2007) tell us “investors believe the execution of strategy is more essential than market position, innovation or even the quality of the strategy itself” (p. 37). The problem organizations face is that even the most engaged employees will not be engaged in implementing strategy when they don’t know what they are expected to accomplish (Haudan, 2007).

According to Miller (2002), poor execution is the reason most change projects fail, not strategy decisions and other unsuitable choices. The recipients of change are the executors in an organization and they hold the power as to whether or not a change initiative will be completed, and if it is long-term (Miller, 2002). Miller (2002) also favors the notion that successful implementation of change is contingent upon the employees being “ready, willing and able to adapt to the new requirement” (p. 360). Employee issues that impede or prevent implementation of a project include a low level of engagement (Haudan, 2007), frustration (Cloke & Goldsmith, 2000), lack of clear and accurate information (Kotter, 1996) and leaderships’ belief in the

project (Miller, 2002), miscommunication, and conflict. Conflicts are often complicated, and constructive ongoing relationships are fundamental to organizations (Bush & Folger, 2005). According to Bush and Folger (2005), looking at conflict as a necessity reinforces the philosophy of social association. People are able to enter into productive conversation by altering conflict and viewing it as a positive anomaly (Bush & Folger, 2005). Tjosvold (1998) considers conflict unavoidable and welcome: “To work in an organization is to be in conflict and to take advantage of joint work requires conflict management” (p. 319). Taking a proactive approach to conflict by giving it consideration in all aspects of a change initiative provides an organization with several opportunities for improvement. According to Ruben (1978), the presence and appropriate management of conflict is “not only essential to the growth, change and evolution of living systems, but are a system’s primary defense against stagnation, detachment, entropy, and eventual extinction” (p. 206).

Many would argue that people are the most valuable resource in an organization, and are essential catalysts for change. However, people bring emotions, personality, opinions, and various complications to the table in any organization. The introduction of impending change sets the foundation for inevitable conflict. Confirming this point, Fishman (1997) believes change is not a bloodless activity contrary to a significant amount of scholarly literature. Fishman (1997) further states, “When emotions are running high and the stakes are even higher, people act like people” (para. 14). When change is mandatory through no decision of his or her own, not everyone has the desire to immediately become a cheerleader for change. People are concerned about their future with the company or their job, immediately making two kinds of conflict, workplace and relationship (Cloke & Goldsmith, 2003). Individuals also frequently respond to change similar to the experience of losing someone (Holden, 2007; Jick, 1990; Kubler-Ross, 1969).

Maintaining the status quo is a comfortable place for people, and change is quite the opposite. Where there is organizational change and conflict, some form of communication is

also present. Resistance to change and interpersonal conflict are common challenges faced by leaders, requiring them to also act as mediators and coaches in order to effectively move toward organizational goals (Mumford, Zaccaro, Connelly, & Marks, 2000). Communication that includes active listening, body language, empathy, and personal responsibility can help mitigate the inherent change challenges of communication and conflict, and greatly improve the odds of successful and sustainable change. Kotter's 8-Step Change Model places a high priority on communication, particularly in Stage 4: Communicating the Change Vision (Kotter, 1996). Armed with timely and accurate information, employees can see their role and its connection to others in the organization. Such information has the potential to inspire self-confidence; providing clarification, significance, and the essential nature of an individual's contribution to the pending change project (Kotter, 1996).

In order to provide an atmosphere favorable to reducing the amount or degree of negative conflict and poor communication, the right tools are necessary. Visualization can be used as a tool to combat these challenges. Visualization as a tool means applying the visual thought process we naturally use as a vehicle for understanding. Using innate visual thinking abilities help us understand day-to-day challenges, questions, and triumphs (Roam, 2008). Haudan (2006) identifies visualization as one component in the language of engagement that is reliable, consistent, and globally understood. Margulies (2002) emphasizes that understanding and interpreting information enables an individual to successfully execute a task or assignment, reminding us "we visualize pictures in our minds and link them to concepts... long before we can articulate it into words" (p. 12). Roam (2008) indicates that business and organizational issues, the frustration of constant technological changes, and the challenges inherent in interpersonal relationships can be represented visually through the use of pictures. Their use ultimately leads to greater understanding and clarification, and aids in solving various types of problems (Roam, 2008).

Primarily due to PowerPoint fatigue (McGinn & Crowley, 2010), visual techniques are becoming mainstream in many business actions today because people are in search of something different, and most importantly, leaders want information to be effective, memorable, understandable, and create a sense of action. According to Kim and Mauborgne (2005), the use of graphics allows a message to be delivered in a way that can be easily understood by anyone. It is an effective tool to consider before, during, and after a change project. Drawing a simple picture can bring hidden pieces of a problem to the forefront (Roam, 2008).

Visualization can provide a way to garner support for a project. There are multiple visualization tools with the potential to positively affect change including graphic facilitation, graphic recording, and mind mapping. Roam (2008) believes communicating using basic drawings, diagrams and pictures, all included in mind mapping, is the most formidable way to prove we know something well. Of interest for this research, mind mapping is a visual tool defined as a graphic technique drawn on one page that begins with a central image, has main themes branching out from it, identified by one or two keywords per branch (Buzan, 1996; Margulies, 2002; Sibbet, 2002). Mind mapping has been widely used in organizations for multiple purposes including problem solving, analyzing, structuring, organizing, writing, information recall, presentations, and planning (Buzan, 1996; Gross, 1993; Margulies, 2002; Roam, 2008; Rosenbaum, 2004; Sibbet, 2002). Research by Toi (2009) has shown that mind mapping is much more effective in helping to recall words than lists.

Statement of the Problem

The problem this study addresses is how to reduce the failure rate of change initiatives. Organizational change is arduous and exhausting, and has a historically low success rate (Kotter, 1996). In a changing environment, people require time to define and completely understand the rules that direct behavior as well as the new expectations (Tager, 2004), and leaders must acknowledge the reflective process that followers must experience to get on board (Tager, 2004). The use of mind mapping has the potential to enable change agents to detect problems or identify

opportunities earlier in the process. The formation and use of mind maps before, during, and after a change initiative can conceivably create an opportunity to reduce reactive behavior. Mind mapping can proactively address the anticipated barriers of conflict and communication inherent in the change process without a significant increase in the budget or additional personnel.

Communication is a frequent challenge in the change process. Regular, authentic communication and open dialogue creates strong partnerships (Friedman, 2008), has the potential to clarify misunderstandings, and fill unexpected gaps in the change process. This research postulates using mind mapping to proactively address the challenges leaders face when working to successfully execute and sustain organizational change. Top level support and understanding, clear and open communication, and accepting and planning for inevitable conflict can provide an organization with the power to improve the dreadful statistics that have come to be expected of organizational change initiatives.

Statement of Purpose

The purpose of this research is to assess the attitudes of people responsible for organizational change, and their inclination to consider the use of mind mapping as an independent change instrument or in conjunction with another organizational change model or method. The central research question of this dissertation is: What is the change readiness level of individuals who show an interest in mind mapping and/or organizational change and their attitude toward the use of mind mapping as a tool for enhancing/improving change management practices?

Organizational change is mandatory for the long-term success of an organization. Deciding when and how to pursue change has long been a bitter pill organizations of all sizes have found difficult to swallow. If the use of a tool has the potential to increase the success rate of change, improve communication, and better manage conflict it should become an integral part of planning, formulating, and implementing organizational change. Attitudes measured will include those specific toward mind mapping as a strategy for enhancing change efforts, but also those that address an individuals' overall readiness for change.

Background/Recent History of Mind Mapping

The origin of mind mapping dates back to the 3rd century BC, a time when Aristotle may have used the technique (Margulies, 2002). Mind mapping was used in the 1960's as a method to help children learn, but the notion has also become progressively popular in business, where it has been successfully applied in project management, planning, reengineering, or any significant organization transition (Rosenbaum, 2004).

Throughout history, the practice has been altered and perfected to become what it is today (<http://www.mindmappingsite.com/history/history/history-of-mind-mapping>). In 1974, Buzan introduced the term Mind Map™ for the first time on a BBC TV series called *Use Your Head*. Buzan (2002) describes mind mapping as the “ultimate organizational thinking tool” (p. 4). Buzan took a very well known technique, made it a bit simpler, gave it a name, and made it a registered trademark.

The central idea and connecting branches that make up a mind map are often accompanied by pictures, and almost always, a variety of color (Buzan, 2002). A mind map can be created by an individual or a group, and is a visual method that can be used to solve problems, plan for activities, create a resume, or take notes (Buzan, 2002; Farrand, Hussain, & Hennessy, 2002). Creating a mind map also entails continuing the process by adding “sub-branches” to the ones that extend from the central idea (Buzan, 2002). The branches all relate to the central idea, providing a much richer and detailed view of the situation than a simple written list (Buzan, 2002).

Conceptual Foundation

The conceptual foundation of this study includes the use of visualization, specifically mind mapping, and the methods for creating organizational change. These two foundations are the premise for this study, specifically the degree to which leaders responsible for change are ready to try an alternative method, mind mapping.

Visualization in the form of mind mapping provides a unique “map” of a process,

problem, project, dilemma, or situation (Sibbet, 2002). Despite its simplicity, mind mapping is more frequently used in conjunction with more structured methods (Crane, 1993), and can create a level of clarity and understanding for people in different levels of an organization (Eppler & Burkhard, 2006). Mind mapping has been proven to enhance, and in many cases, transcend the written or spoken word (Eppler & Burkhard, 2007). Higgins (1995a) states that creative methods are fundamental elements in the formulation of strategy. A few of the creative methods Higgins (1995b) describes are in the form of visuals such as storyboarding and graphic facilitation. Higgins (1995b) further states individuals or groups can benefit from the increased communication and clarity that such practices have been shown to bring about related to organizational change initiatives.

The literature reviewed to support this research includes emphasis on visualization; specifically mind mapping, organizational change, and the interaction between the two. Currently little research exists using mind mapping as a single change process or in conjunction with another model. The hope of this exploratory research contained herein will add to the body of knowledge concerning the readiness of leaders to incorporate mind mapping into their change initiatives.

Conceptual and Operational Definitions

Mind mapping: “a graphic technique drawn on one page that begins with a central image and has main themes branching out from it, identified by one or two keywords per branch” (Sibbet, 2002). For this study, a mind map will be provided including a brief definition, as well past and potential uses.

Organizational Change Readiness Assessment (OCRA): a tool used to evaluate readiness for change within an organization, using four components; organizational support, cultural, change environment, and employee attitudes and behaviors (Russell, 2010).

Organizational change: an alteration of structure, quality or process over a period of time in an organization (Van de Ven & Poole, 1995).

Organizational change model: an organizational change theory proven to successfully enact change in an organization. Multiple change models exist and the one selected is based on the specific needs of the organization.

Assumptions and Delimitations of the Study

This research assumes several matters to be true pertaining to mind mapping and organizational change. It is assumed that the incidence of successful organizational change will continue to remain at an alarmingly low level. Scholars, leaders, and experts in change will remain diligent in their research to improve the success rate of organizational change efforts. The need for organizations to adapt to the rapidly changing business landscape will remain a constant challenge. The perpetual flow of information in the form of speech, the written word, and visuals will continue to compete for individuals' and organizations' attention, leaving each to decide what to use, what to discard, and what to interpret. Communication will continue to be the pipeline through which all actions in organizational change take place. The use of mind mapping provides an alternative communication channel that has the possibility of providing a clearer vision and understanding of a change process.

Significance of Study

Organizations that cannot compete due to processes, production, personnel, logistics, technology, or other factors will not enjoy long-term success without change (Kotter, 1996). Unfortunately, the literature on the successful implementation of organizational change indicates a continued bleak future if history is any indication. Any instrument, practice, tool, or action supported by research that has the possibility of changing this austere outlook, is worthy of further investigation. Change Leaders identify communication as one of the most frequently identified obstacles before, during, and after organizational change (Bush & Folger, 2005; Friedman, 2008; Kotter, 1996; Miller, 2002; Pollitt, 2003; Roam, 2008; Tager, 2004).

Leader readiness/attitude toward change. Leader behavior and actions predicate much of the actions of organizational change. While the decision to use alternate methods,

techniques, or tools to design, implement, and communicate change rests with the leader, the examination of the recipients, not just past experiences, should aid in determining whether or not to “try something else”. The literature repeatedly points out the need for communication, be it direct, through the grapevine, through revealing the big picture, incremental, all at once, or that no change is needed. In order for any change to be successful, it depends not only on the leader, but the actions of the recipient’s ultimately decide the fate of change (Fishman, 1997; Miller, 2002). Of course the leader can impact the outcome by following experienced scholars and businessmen, but some form of relationship must be present between the leaders and change recipients or failure is imminent (Annin, 2008; Cloke & Goldsmith, 2003; Di Fonzo & Bordia, 1998; Greenleaf, Spears, & Vail, 1998).

Leader confidence in change recipients. If organizational change has been an unmitigated disaster in the past, what is the harm in getting out of the comfort zone and trying another approach? Is it possible to increase failure? When leaders do not have the confidence in the recipients to provide them with all the necessary information, short or long term, the chances of success are greatly reduced (Kotter, 1996). Some recipients may not initially, or ever, understand or be involved in all the aspects of change, but their resistance and level of uncertainty can be decreased by effective communication (Bush & Folger, 2005; Friedman, 2008; Kotter, 1996; Pollitt, 2003; Tager, 2004). It is a misnomer that leaders are the only ones allowed or required to have complete knowledge of a change initiative (Fishman, 1997).

Inform change recipients. While some information is decidedly confidential, uncertainty created by lack of information naturally makes recipients resistant to change. If job details, either an elimination or alteration of responsibilities, or an overview of a new task, department or restructuring can be communicated, some of the major reasons for resistance can be lessened or possibly alleviated. The major reasons for resistance, leading to uncertainty and lack of commitment are job security, incomplete or missing information, previous unsuccessful experiences with change, among others. Creating an environment in which rumors

and speculation are replaced with facts and direction can improve the chances of successful change. The most critical element necessary to achieve such an environment is to find a way to effectively communicate the path and destination of change to the recipients. Why do many leaders think the recipients of change don't matter, or are incapable of what is necessary for a successful change (Friedman, 2008)? A change project could be likened to a trip. Consider traveling by bus, plane, or ship. Most people do not know how to operate any of these modes of transportation, understand how they work, or even care, but knowing the destination makes the trip more enjoyable.

Enhanced communication. Communication is defined as the exchange of information. Sounds simple enough, but for Change Leaders, it is one of the most complex aspects of their job (Arbjorn, 2011; Mento, Jones, & Dirndorfer, 2002; Mento, Martinelli, & Jones, 1999). When people are responsible for the exchange of information, as is always the case, disconnects and unclear messages are the result; what has been done in the past is clearly not working. Nothing will ever solve the many complicated issues and challenges that seem to be inevitable when linked with organizational change, but creating an environment or utilizing an additional tool with the potential to improve the effectiveness of communication, could improve the readiness of leaders to approach change. Most leaders are just as uncomfortable with change as the recipients. Reducing the apprehension of leaders, in turn, creates an atmosphere of confidence and commitment to communication (Bush & Folger, 2005; Friedman, 2008; Kotter, 1996; Tager, 2004). Leaders who make a commitment to improved, effective, and clear communication have the best results. According to research, the most frequent complaint from recipients is the lack of communication; they simply want to know what is going on (Buzan, 1989, 1996; Crane, 1993; Freidman, 2008; Margulies, 2002; McGinn & Crowley, 2010; Pollitt, 2003; Roam, 2008; Tager, 2004)!

Improved success rate. It is the intention of this researcher to determine the readiness of Change Leaders to consider an alternative change process, specifically mind mapping. Leaders, managers, and followers dedicate their time, effort, and considerable resources to attempt a

change initiative in spite of the odds, because change is a necessity for organizations in the 21st century (Kotter, 1996). The success of organizational change entails the culmination and success of multiple dynamics and the process chosen by a change agent depends on the size and type of change as well as the organization.

Summary

The goal of organizational change is to alter and/or improve an aspect of an organization, and for the change to be sustainable. The visualization tool of mind mapping offers the possibility of aiding the process and increasing understanding when used as guide for change (Kim & Mauborgne, 2005). The use of mind mapping as a companion to a change model or independently, can clarify steps, roles, positions, departments, processes, and communication (Buzan, 1996; Gross, 1993; Margulies, 2002; Roam, 2008; Rosenbaum, 2004; Sibbet, 2002).

This research will concentrate on the readiness of Change Leaders and Change Participants toward change and their attitude toward the consideration to use mind mapping as alternative method to plan, communicate, and implement organizational change. The goal of this research will help determine if Change Leaders and/or Change Participants are willing to attempt a different change process, specifically the use of mind mapping, despite past experiences, and their beliefs and attitudes toward organizational change.

The context of this research will afford organizations with future connections to help make change endure by exploring the ways in which mind mapping can be utilized. The additional dimension of using mind mapping in a change project reinforces the validity and integrity of change models by eliminating gaps in the planning, design, and implementation of a plan (Friedman, 2008). Fully utilizing any tool, approach, practice, or method of communication delivery available that can help clarify goals and allows followers to “see” the big picture, is in the best interest of both the leaders and followers of an organization (Roam, 2008; Sibbet, 2012). The use of mind mapping should become a mainstream method and part of the change process in order to improve the quality of communication, thereby improving the chances of sustainability.

Chapter 2: Literature Review

Introduction

The following literature reviews the disheartening lack of success of organizational change projects, and the need for Change Leaders to consider using alternate methods to improve the dismal statistics of successful change. Change in and of itself creates a foundation for conflict (Kotter, 2007; Kotter & Schlesinger, 1979). Combine the necessity of organizational change, and the resistance to engage in it, and not surprisingly change initiatives have historically poor results (Aiken & Keller, 2009; Fishman, 1997; Franken, Edwards, & Lambert, 2009; Kotter, 1996; Miller, 2002).

A few reasons for constant change include the emergence of new technologies, global competition, and changing values and lifestyles (Holder, 2002). Change is also rapid and complex, and requires a substantial amount of clear communication, commitment, and ownership throughout the entire organization (Holder, 2002), as well as the ability to learn from previous mistakes (Smith, 2013). Every organization is unique regardless of the industry in which they do business, however, there are two elements always present in each one; people and the need for effective communication (Buzan, 1989, 1996; Buzan & Buzan, 1996; Campbell, 2006; Cloke & Goldsmith, 2000; Eppler, 2007; Margulies, 2002; Palmer, 2008; Schneider & Bowen, 1995; Sibbet, 2008). There is no escaping either one.

Multiple change models have proven successful, yet the overall statistics reflect partial change, or show the process is normally unsuccessful almost before it begins (Kotter, 1996). Those who complete all the steps in a change model, often find the results are not sustainable (Kotter, 1996). Given that organizational change is necessary and inevitable (Kotter, 1996; Mento et al., 2002; Mento et al., 1999; Miller, 2002), and adding the lack of effective communication and the conflict it produces (Cloke & Goldsmith, 2000; Kotter, 1996; Mento et al., 2002), the path to change is a rough one. The literature shows a key element present in every change project is communication (Buzan, 1989, 1996; Crane, 1993; Margulies, 2002; McGinn &

Crowley, 2010; Pollitt, 2003; Roam, 2008); therefore exploring the use of multiple channels and/or methods of communication has the possibility to increase the instance of successful change.

Unfortunately, unfettered communication or the lack of productive communication creates a platform for conflict, poisoning the change environment. People are the reason communication is necessary, as well as the reason why it has a tendency to go awry, and in order to plan, design, and implement change; the two must be in harmony.

The use of a mind mapping as a visual communication method has the possibility of creating an environment where change can be successful and sustainable (Buzan, 1989; Mento et al., 2002; Mento et al., 1999; Arlbjorn, 2011). In some organizations, mind mapping has replaced more conventional methods of recording communication (Margulies, 2002), but has limited use in the organizational change process. The focus of this research is assessing the readiness of Change Leaders to consider the use of mind mapping as an independent change instrument, or in conjunction with another organizational change model or method.

Organizational Change

As Senge (1999) noted, the definition or implications of the word “change” often has contradictory meanings, and can be issues inside and/or outside the organization. Examples include, but are not limited to: technology, competition, customers, practices, styles, strategies, and scope (Senge, 1999). If an organization is going to stay competitive and grow, the necessity of change should be one of the first items on a to-do list. Given the poor success rate of such undertakings, organizations must find a way improve their capability to change. According to Karp (2004) the success of change is dependent on the people in the organization, and his methodology suggests increasing people’s commitment to the project is one way to reach this goal.

The intervention of leaders is frequently necessary in order to keep up with external changes (Trompenaars & Woolliams, 2003). However, leading change from the top down is not a requirement, but the need for change must be a perpetual consideration, and for some

organizations, more frequently others (Reich, 2000; Trompenaars & Woolliams, 2003). One of the leading change management models organizations often implement is Kotter's Change Model, which pinpoints eight steps to follow, in order, for an organization to increase their chance of successful change (Kotter, 1996). Organizations are no stranger to change, and globalization and technology are two catalysts that have increased the competition that exists for any size organization today. Scholars, experienced Change Leaders, and business experts from every industry imaginable have struggled to bring enduring change to their organizations. Sadly, most are unsuccessful (Buzan, 1996; Feeley & Kathenes, 2007; Kotter, 1996; Kouzes & Posner, 1987).

Unsuccessful change. While the intent and proof of the success of the many change models available is laudable, the failure rate remains alarmingly high, from 50 percent to 70 percent, as discovered by many in the field (Aiken & Keller, 2009; Beer & Nohria, 2000; Burke, 2011; Funk, 2011; Kotter, 1996). Miller (2002) notes that research conducted by the Gartner Group, shows 70% of organizations in need of critical change fail to reach their intended goal. Additional statistics of successful change are even more dismal; including a project abandonment rate of 28%, budget and/or scheduling difficulties are experienced by 46%, and a staggering 80% do not maintain the plan as designed within six months of implementation (Miller, 2002). Such a high instance of defeat sets the stage for the likelihood of organizational extinction, while the need for change almost certainly spells the demise for many organizations (Kotter & Schlesinger, 1979).

The premise of Kotter's (1996) change model and subsequent research is that "Leading change is both absolutely essential and incredibly difficult" (p. 59). It is important to know that executing strategic change includes understanding the management and leadership actions necessary for success (Franken et al., 2009). Leaders assume a tremendous amount of responsibility and risk when undertaking a difficult, but necessary change project (Heifetz & Linsky, 2002). Change initiatives are typically wrought with hidden competing commitments,

such as possible conflict or fear of failure (Heifetz & Linsky, 2002). There are multiple reasons for the staggering percentage of failed change, but there are two that tend to repeatedly show up during project involving change (Wharton & Roi, 2002). First, Wharton and Roi's research concluded that most plans fail to work out as originally intended (2002). The unforeseen and unpredictable outcomes definitely create challenges, but when handled correctly normally prove to be beneficial (Wharton & Roi, 2002). Secondly, and intertwined with the first problem, is that the challenges of unpredictable outcomes are poorly dealt with since leaders are not usually prepared to meet them head on, despite their frequent directive for participants to be flexible and adaptable (Wharton & Roi, 2002).

The failure of change projects can also be blamed on the inattentiveness of leaders to understand employee perceptions of change, as well as some of the reasons for differences in behavior that ultimately impact the process and result of change (Heynoski, 2011). Addressing the impact of employee behaviors and attitudes through a system of interviews has been found to significantly influence particular goals (Gonzales, 2006). Leaders who properly managed change by providing accurate and timely information communicated clearly, tend to increase receptivity, optimism, and facilitating behaviors of the participants (Gonzales, 2006).

Leader readiness/attitude toward change. Wharton and Roi (2002) coined the phrase, "strategic readiness", to indicate the need for heightened alertness, readiness, and attentiveness as it relates to change, both inside and outside the organization. One example of strategic readiness on the part of a leader includes accepting and taking advantage of the paradox and contradiction that is inevitable during change (Wharton & Roi, 2002). Cloke & Goldsmith (2003) adopt the belief that handled correctly; conflict can create a pathway to greater understanding, ultimately leading to productive communications, meaningful relationships, and connections.

It is important for leaders to overcome the resistance to change they experience, as well as that of the recipients, creating an interesting dynamic (Kotter, 1996; Kotter & Schlesinger, 1979). Unfortunately, it is not uncommon for leaders to refuse to alter their behavior or actions,

contradicting the requirements placed on the followers (Kotter, 1996), justifying their behavior behind the guise of experience (Miller, 2002). An example involved a leader interested in altering the company appraisal system, but he did not include himself in the procedure, making his behavior inconsistent with his expectations, leading the employees to question organizational beliefs and values (Miller, 2002). To increase the chances of successful change, it is a requirement of leaders to personally adapt to the change, and have a passionate belief in what makes change successful (Miller, 2002). According to Miller (2002), adapting to change is an added challenge for a leader because “a perceived need exists to model “grace under pressure” during times of turbulence” (p. 362). In some cultures, the “ability to appear unemotional and disconnected from surrounding events” (Miller, 2002, p. 362) is often a measurement by which leaders are judged (Miller, 2002). It is important that leaders of change develop the competencies and those of their employees that will allow them to manage organizational change and its accompanying uncertainty and complexities (Callan, Latemore, & Paulsen, 2004).

The unsuccessful management of change can be attributed to a multitude of factors and situations; however, some appear more frequently than others (Sirkin, Keenan, & Jackson, 2005). When faced with the inevitability of unpredictable and unforeseen outcomes, traditional leadership practices, such as appearing to have all the answers and be in total control are ineffective (Wharton & Roi, 2002). In addition, Sirkin et al. (2005) found that few leaders agree on the factors that have the most impact on transformation proposals. They found the disparity in agreement was due to the viewpoint each change leader brings to the project, based on their experience; and while their experience is valuable, it often makes companies take on too many projects, creating a shortage of resources and skills (Sirkin et al., 2005). Compounding this problem is the use of different approaches in different parts of the organization, creating more unrest than is necessary (Sirkin et al., 2005).

Leader behavior. Change is wrought with multiple unknowns, creating one of the difficulties many leaders experience and it is important to note that their behavior guides

followers and peers to show sincerity and commitment to the initiative (Wharton & Roi, 2002). Leaders must be fully involved in a change process to help ease the difficulty and disruptive nature that people experience. Leaders must embrace the project and lead the charge to success (Holden, 2007). Leaders must personally change their behavior (Miller, 2002) in order to successfully involve employees throughout the organization (Schaffer & Thomson, 1992; Wagner, 2006). At the center of leader behavior and employee response is trust (Greenleaf et al., 1998; Wheatley & Kellner-Rogers, 1998). Trust has the power to bring members together, and allows for effective communication with each other (Boverie & Kroth, 2001). The aspects of trust that influence employee response to change must be present in multiple capacities (Sloyan, 2009). They include trust in the organization, the leaders, each other, the process, and the outcome (Sloyan, 2009). Additional findings support the importance of and interconnectivity between relationship building and the servant theory of leadership (Greenleaf et al., 1998), culture and change, as well as trust (Bolman & Deal, 2008; Caldwell & Hayes, 2007; Dirks & Skarlicki, 2009; Wheatley, 2006). Similar research by Vakola, Tsausis, & Nkiolaou (2004) examined the relationship between individual characteristics, emotions, attitudes, and personality traits that impact change. It is equally important to display modeling behaviors, and assume employees view it as an example to exemplify (Miller, 2002).

Fishman (1997) sums up the issue of the importance of leaders embracing change. One of Fishman's Ten Laws of Change states, "You can't change the company without changing yourself, however, even if the company doesn't change, you will" (Fishman, 1997, p. 6). Included in the design and implementation of organizational change, it is imperative for the leader to recognize and address the importance of altering recipients' beliefs, attitudes, and how they currently perform their jobs (Fishman, 1997). According to Miller (2002), a leader must be positive, self-confident, innovative, collaborative, focused, organized, and proactive in order to adapt his/her behavior during all stages of a change initiative. Leaders must be cognizant of the impact of change on the recipients of change. Issues and concerns of change

recipients include fear, ambiguity (Haudan, 2008; Tuason, 2010), a sense of job uncertainty, lack of understanding the big picture, and not having control of particular circumstances (Bordia, Hobman, Jones, Gallios, & Callan, 2004; Di Fonzo & Bordia, 1998; Tuason, 2010). Significant number of change failures occur during implementation; therefore leaders must be mindful of the importance of making sure the recipients of change are ready, willing, and able to adjust to the new requirements (Miller, 2002). Leaders of change who dismiss the significance of addressing the impact of change on recipients increase the risk of incomplete, incorrect or unsuccessful implementation (Miller, 2002). Given the low statistics of successful change, such behavior should be considered an unnecessary risk.

Leaders often believe they must appear to be all knowing, in control, and charged with implementing his or her idea, since it is thought to be the best one (Wharton & Roi, 2002). However, such a leadership strategy can create additional problems. According to Pascale, Milleman, & Gioja (2000) “it is more important for a leader to be a context setter, essentially responsible for creating an environment in which followers can learn, than to be in charge and capable of knowing all the answers” (p. 191). A context setter takes into consideration that being open, flexible, creative, and responsive contributes to the ultimate success of an organizational change project (Pascale et al., 2000). Leaders who model such behaviors are more likely to successfully enlist the support and enthusiasm of the staff (Wharton & Roi, 2002). Leaders who are upfront with employees about what information they do and don’t know, and the reasons why, help mitigate rumors and uncertainty (Richardson & Denton, 1996).

Recipients of Change

While it is true that leaders are faced with multiple challenges before, during and after an organizational change; all too often the recipients do not receive the attention and focus they need and deserve (Karp, 2004). Often, the recipients of change are deemed culpable for failed or unsustainable change, citing lack of skill, intelligence, and follow through (Renesch, 2007a). In addition to an unsuccessful initiative, the recipients are left demoralized, apprehensive, and

doubtful of their ability to perform their job (Renesch, 2007a). Leaders who fail to recognize, address, or give credence to the impact on change recipients, and their value, are doing the organization a disservice (Turner, 2009). Renesch (2007b) identifies two simple ways to look at change: content and context. Ting-Toomey and Oetzel (2001) teach that the context of change involves giving meaning to the work done within an organization. Change agents tend to focus on content such as creating new and improved products and/or processes, revising budgets, repositioning employees, altering job responsibilities, and reworking the organizational chart (Renesch, 2007b).

While content is important, the real change must come from the recipients, who in most cases are largely the implementers. A new process will not necessarily produce a surge of enthusiasm throughout the organization; in fact it may increase resistance, decrease readiness, and/or create disillusionment for the employees (Renesch, 2007b; Turner, 2009). While Atkinson and Butcher (2003) suggest that “command and control change models that use a rational, systematic and logical approach, are most effective” (p. 285). There are a significant number of disconnects and behaviors that are overlooked, but properly addressing both of these issues can positively impact the result of a change project (Cicmil, 1999). Ignoring the emotions, personalities and experiences of employees increases the likelihood of an undesirable and highly emotional change experience for the employees, the organization, as well as the change leader (Bryant & Wolfram Cox, 2006; By, 2005; Vakola et al., 2004). Focusing on how recipients experience change, including them in change conversations (Wolfram Cox, 1997), and acknowledging their viewpoints (Boje, 1995; De Cock, 1998; Karp, 2004) can lead to an improved understanding of the personal nature and emotional aspect of change (Ashkanasy, Zerbe, & Hartel, 2005; Hardy, Palmer, & Phillips, 2000).

Change Leaders interested in successful and lasting change, are well served to give the context or “soft stuff” a priority by addressing concerns and the work-related and emotional impact on the recipients (Renesch, 2007b). Employees faced with organizational change are

likely to be extremely emotional, and research indicates they experience feelings of grief, anger, sadness, and loss (Putman & Mumby, 1993). However, they are often discouraged from expressing their emotions, citing such behavior as inappropriate in a workplace environment (Putman & Mumby, 1993). Research has shown that worker's with a positive approach when considering the risks associated with change and the freedom to solve job associated problems, are more confident in their job performance abilities, and report an increased readiness for change (Cunningham et al., 2002).

Recipient resistance to change. The 21st century business landscape, and the speed at which change is necessary, whether it is expected or unexpected, naturally causes people to be afraid and vulnerable when the norm is challenged (Kotter & Schlesinger, 1979). Resistance to change is one of the most powerful drivers of human behavior, affecting people physically and emotionally (Riches, 2010a), and should be given significant attention when considering change (Caruth, Middlebrook, & Rachel, 1985; Oreg, 2003; Riches, 2010a; Smith, 2000). Not surprisingly, the people most impacted by rudimentary change tend to be the most resistant (Aiken & Keller, 2009; Cloke & Goldsmith, 2003; Fishman, 1997; Haudan, 2007; Kotter & Schlesinger, 1979; Schaffer & Thomson, 1992).

Recipient uncertainty of change. Uncertainty and successful organizational change are not compatible, and create multiple negative consequences including increased stress (Schweiger & DeNisi, 1991), turnover (Greenhalgh & Sutton, 1991; Johnson, Bernhagen, Miller, & Allen, 1996), and decreased job satisfaction (Ashford, Lee, & Bobko, 1989; Nelson, Cooper, & Jackson, 1995), a reduction in organizational commitment (Ashford et al., 1989; Hui & Lee, 2000), and trust (Schweiger & DeNisi, 1991). Recipients deserve to be properly informed of the reasons for a change, including the future organizational direction, plans for sustainability, and the state of the industry (Bastien, 1987; Bordia, Jones, Gallois, Callan, & Di Fonzo, 2006;).

Recipient readiness to change. Cunningham et al. (2002) assessed factors affecting readiness to change, which included logistical and job-related risks, the capacity to cope and

elucidate job-related difficulties, and collective support. Readiness for change and resistance to change are very different factors for drivers of change and the recipients (Riches, 2009; Russell, 2010). Leaders can improve the readiness of change recipients by providing clear, accurate, timely, and honest communication; ensuring thorough understanding of what is expected, fostering an appropriate attitude, and acknowledging and addressing emotional responses (Caruth et al., 1985; Kalies, 2006; Riches, 2009). Further research using Karasek's (1979) measure of active vs. passive job paradigms and readiness for change, Cunningham et al. (2002) found that employees with an active approach to job-associated challenges and self-confidence in their job increased their readiness for change.

Improving the climate of change for recipients. Haudan (2007) speaks of strategically engaging front line employees by involving them, thereby providing the opportunity for tangible change and subsequent. As a leader facing change, the stages of denial, deference, acceptance, and justification are a necessary precursor to fully believing in, and advocating a change (Kalies, 2006). It is easy to be unaware of the need for employees to also experience those stages (Kalies, 2006). Awareness of this phenomenon can clear a path for a strong alliance and garner mutual support of employees (Kalies, 2006).

The first of Fishman's (1997) Ten Laws of Change states, "the informal network is as powerful as the formal chain of command" (para. 4). It is important to remember people can't be drafted into change, they have to enroll (Fishman, 1997), and it is difficult for individuals to deal with multiple and continuous change (Jick, 1990). Rashid, Sambasivan, and Rahman (2004) examined the impact of organizational culture on attitudes about change and discovered a link between the culture of an organization and the emotional, intellectual, and behavioral tendency of attitudes toward organizational change. Rashid et al. (2004) conclude that the differing feelings toward organizational change are closely related to the type of culture present in the organization. Results show that differing organizational cultures have different levels of acceptance of attitudes, leading to the conclusion that certain types of organizational culture can facilitate the acceptability of change (Rashid et al., 2004).

Change recipient responses and behavior. How people respond to change depends on how organizations can help individuals through a transition (Jick, 1991). Anxiety, uncertainty, and hesitation are emotions that come to the forefront when there is a change in routine (Garvin & Roberto, 2005), and/or oftentimes, the need to learn a completely different manner in which to perform a job (Bordia et al., 2006; Caruth et al., 1985; Cunningham et al., 2002; Di Fonzo & Bordia, 1998; Haudan, 2008; Miller, 2002; Tuason, 2010).

Often, people who are outwardly and sincerely committed to change, unknowingly apply productive energy toward those various competing commitments (Keegan & Lahey, 2009). Aiken and Keller (2009) found that recognizing and identifying the irrational biases most people have is important. It is difficult for the recipients of change to put aside their emotions during organizational change (Bryant & Wolfram Cox, 2006). The alteration of processes and/or transitioning to a different job or department is emotional for employees, particularly those who have had past experience, or are simply resistant to the need to move forward (Bryant & Wolfram Cox, 2006). Addressing the presence and impact of emotional labor can provide an organization with valuable insight (Bryant & Wolfram Cox, 2006). Emotional labor has the capacity to silence, and ironically, intensify emotions during the conversation of change (Bryant & Wolfram Cox, 2006). Useful examples instrumental to the cycle of change include being aware of counterintuitive insights about how employees tend to interpret their environment, and that they actually decide on their own how to act (Aiken & Keller, 2009; Cloke & Goldsmith, 2003; Kotter, 1996).

Providing clarity through effective communication (Fishman, 1997; Kotter, 1996), laying a solid foundation for change (Schaffer & Thomson, 1992), challenging (Jick, 1991), and involving participants in the process at some level can be quite effective (Fishman, 1997; Kotter, 1996). Wagner (2006) used Weick's (1995) seven properties of sensemaking to investigate ways in which change recipients experience, conceptualize, and comprehend planned organizational change. Wagner identified four distinctive categories; aligned, conflicted, disillusioned, and dysfunctional (2006).

Despite the angst surrounding change the expectation of positive results can be improved by providing individuals with the opportunity to utilize performance-management systems to prioritize personal objectives (Haudan, 2007), and the chance to achieve success by taking advantage of the conflict that change creates (Cloke & Goldsmith, 2000). Holden's (2007) statement "Real transformation often comes in disruptive ways, which we quite naturally resist" (p. 9), sums up the issue of constant challenge of change, and its impact on individuals and leaders.

Positive Change

In the face of change, it is a challenge to require employees to alter tasks, and/or a project or responsibility that is important to them (Heifetz & Linsky, 2002). Schaffer and Thomson's (1992) concept of results-driven change suggests progress can be sped up, and provides a way to combat three common objectives in large change efforts: increasing business performance, organizational ability, and laying a foundation to improve the readiness of employees. When seemingly opposing forces connect, inevitably, the result is conflict of some type, and while conflict can be negative or positive it can stand in the way of successful change (Cloke & Goldsmith, 2000). Numerous activities, practices, and processes are recommended to facilitate effective change communication. Employee and leader response to change can be augmented by several critical actions including, engaging employees, creating a sense of urgency, proper preparation, working to ensure understanding of the process, how it will improve the organization, and utilizing multiple communication channels and methods (Barbarinsa, 2011; Davis, 2010; Mokwunye, 2008). Given that defining organizational goals and effectively communicating them so they are understood is such an instrumental step the change process (Davis, 2010), one of the alternate channels or methods in which to convey the message is through the use of visualization (Buzan, 1995; Sibbet, 2008). However, it is important to remember that change is about people (Fishman, 1997), people are the key (Haudan, 2007), and people will surprise you (Fishman, 1997).

Communicating Change

Communication between management and employees is a strategy commonly used to reduce uncertainty during change (Lewis & Seibold, 1998; Schweiger & DeNisi, 1991). Communication in which employees are able to obtain information directly associated to the change process, and the projected outcomes, create an atmosphere in which employees are able to partake in the decision making process, thereby resulting in increased awareness, understanding, and sense of control (Ashford & Black, 1996; Locke & Schweiger, 1979; Miller, 1981).

Effective communication strategies are elusive, but absolutely necessary for organizational change. Two methods of communication always present in an organization are rumors, and the social network of multiple relationships. Gonzales (2006) identified two actions that impact specific goals: facilitating and hindering. The traditional methods by which all communications are made within an organization are not always the best course of action when dealing with change (Di Fonzo & Bordia, 1998). Clearly communicating the vision of the change and the reasons for it, creates well informed and inspired partners in the decision making process (Gonzales, 2006). A concerted effort to create real optimism, albeit limited, can be improved by positively altering hindering behaviors (Gonzales, 2006).

Rumors are at the top of the list when it comes to communication between employees, and in stark contrast, organizational silence is a powerful and frightening result of poor communication (Di Fonzo & Bordia, 1998; Vakola & Bouradas, 2005). Vakola and Bouradas (2005) emphasize the impact of organizational silence; the result of a supervisor's attitude toward silence, eventually reflected in the same behaviors from employees, reducing organizational efficiency.

Change creates a climate of uncertainty, making the rumor mill a very active and normally inaccurate method of communication (Di Fonzo & Bordia, 1998). Proper communication has the propensity to diminish the level of employee uncertainty, clearing the path to build and sustain trust (Di Fonzo & Bordia, 1998). While rumors will always be present

in an organization, the inherent social nature of an organization can prove to be an effective mode of communication (Annin, 2008). Utilizing the power of the social network and the resulting relationships can prove to be a time worthy focus for transfer of information (Annin, 2008).

Communication that is timely, accurate, and includes information about when and what is going to happen. According to Kalies (2006), this includes an overview of the initial and subsequent steps, and leadership humility in the form of conveying there are future questions that will remain unanswered. Organizing and utilizing multiple methods of communication enables change recipients of all learning styles to hear, see, gather, comprehend, and embrace the information (Kalies, 2006). One of the most common physiological states as it relates to organizational change, is that of uncertainty (Bordia et al., 2006). Bordia et al. (2006) identified three types of uncertainties during change: strategic, structural, and job-related which all affect individuals' feelings of control and psychological strain, and are connected with management communication and participation in decision-making. High on the list of reasons for uncertainty are the lack of information (Berger & Calabrese, 1975), or vague and inconsistent information (Putnam & Sorenson, 1982). It is important to remember that planned communication is crucial, however, regardless of the level and accuracy or timeliness, there will always be criticism from recipients (Callan et al., 2004).

Visual Communication

Definition. Finch-Maecklebergh (2006) developed the Organizational Development Visual Reference Tool as a framework to represent the vast amount of information and constant changes necessary to the organizational development field, many aspects of which are not unlike organizational change. There are dozens of different visual tools and techniques that use symbols instead of words to aid in thinking or problem solving (Van de Ven & Johnson, 2006). Hartley (1996) has defined visual tools as “symbols graphically linked by mental associations to create a pattern of information and a form of knowledge about an idea” (p. 24). The significance

of this definition is that visual tools are much more than a way to store ideas that have already been formulated and developed; they also offer a unique and effective manner in which to construct content knowledge (Hartley, 1996).

Linear vs. non-linear thinking. Business traditionally communicates, presents, disseminates information, plans, implements, and reports in a linear fashion through the use of text (Buzan, 1996; Carey & Ligos, 1997; DeBono, 1990; Eppler & Burkhard, 2007; Finch-Maecklebergh, 2006; Haudan, 2007; Mandhyan, 2009b; McGinn, 2012; Margulies, 2002; Mento et al., 1999; Pollitt, 2003; Rosenbaum, 2004; Sibbet, 2008; West-Allen, 2012). Individuals have a tendency to be left-brained (linear) or right-brained (creative, non-linear thinkers), however, everyone has the capacity to utilize both sides of their brain (Buzan, 1989; Buzan & Buzan, 1996; Higgins, 1995b). Given that the communication of change is imperative and challenging, the retention of the information can be just as vital (Buzan, 2008). According to Buzan (2008), people do not retain 80% of what they learn during the course of a day primarily because of how people use their brains, and how the information is communicated. When communication comes in a colorful form, people often dismiss the information as unreliable or nonsense (Buzan, 2008). The truth is, by using both sides of the brain and removing the blindness with which people are accustomed to, information has a greater retention rate (Buzan, 2008). Many problems are complex and unstructured, and such problems offer a springboard to new approaches and innovation. According to Roam (2011), “belief in the emerging power of pictures is due to several nuances evolving in the world of business; they include globalization, information overload, and staggering increases in the availability and speed of communication” (p. 51). Roam (2011) conveys the impact of visual communications through the statement, “pictures make words matter” (p. 20).

Visual categories. The use of visual aids has been a common way to communicate for centuries. Research on visual thinking techniques has identified two very wide-ranging categories: basic theories and multiple applications of each one (Mento et al., 1999; Sanders,

1998). Facets of visual thinking and learning have focused on the use of visual thinking techniques for specific learning circumstances or certain business challenges (Lohse, Biolsi, Walker, & Reuter, 1994). Various visual techniques have been used effectively in business today in the area of strategic planning (Kaplan & Norton, 2000; Kim & Mauborgne, 2005; Platts & Tan, 2004), and in complex decision-making (Fiol & Huff, 1992; Lohse et al., 1994; Tufte, 1990), thereby making visualization a useful application to organizational change. According to Liff and Posey (2004), the application of visual techniques can be attributed to better learning, improved planning, more effective decision making, improvements in customer satisfaction, overall productivity, and accuracy. The use of visualization as a tool for business includes the specific types mentioned earlier, but the consideration of its use in conjunction with traditional business functions, processes, and communication methods is not mainstream. According to Liff and Posey (2004), it is important to keep as much information as possible in front of employees in a visual format, as opposed to text, to enhance or improve employee understanding, and utilize multiple channels in the communication of organizational change. There are multiple types of visual communication and even more situations in which they can be used. Some of the most widely used are task specific organizers, concept maps, process maps, visual metaphors (Ausubel, 1960), input output diagrams, fishbone diagrams (Craig, 2000), note taking, mind mapping (Buzan, 1996; Sibbet, 2010), and visual recording (Sibbet, 2010). Such visual tools aid the user in organizing or following instructions, completing a task, or in seeing relationships (Craig, 2000).

Concept maps. The method of creating concept maps can be time consuming, so they should only be used by those familiar with the process (Ausubel, 1960). Related thoughts and ideas within a concept map are connected by lines and brief descriptions, and map describes visually how various tasks are organized and the step-by-step sequence that is to be followed to reach an objective (Ausubel, 1960). Concept maps contain more information than a mind map, but lack the structure allowing for new ideas to be added (Ausubel, 1960).

Note taking. Visual note taking has a long history. According to Margulies (2002), primitive cave paintings, “Hieroglyphics of ancient Egypt, and notes and sketches by Leonardo da Vinci and Michelangelo are examples of visual note taking” (p. 10). Children visualize pictures before they learn a language, linking them to concepts; unfortunately, creativity is often hindered when children are instructed to “write only words in one color on lined paper “ (Margulies, 2002). According to research, the use of mind mapping can improve the efficiency of certain tasks, such as note taking (Ericksson & Hauer, 2004; Farrand et al., 2002; Margulies, 2002). Traditional linear methods of taking notes are not time efficient, due to our complex thought processes, but mind mapping can capture complicated information and processes quickly and accurately (Ericksson & Hauer, 2004; Farrand et al., 2002; Margulies, 2002).

Visual recording. Visual recording, or graphic facilitation, is a process in which a drawing is made of a real-time discussion using words, pictures, and symbols, ultimately displaying relationships, increasing understanding and retention of the subject matter, and clarifying processes (Ball, 2010; Sibbet, 2008; Zimmerman, 2008).

Visualization, Focus, Accuracy of Communication

Contemporary issues are complex and their communication must be improved when, exchanging opinions, understanding relationships among ideas, identifying critical insights, and retaining information across time and events. Visual representations can communicate compelling and lasting ancillary implications through the use of colors, placement, size, arrows, shapes, and connections to icons. Ideas can be emphasized, categorized, and promoted in importance through the use of colors, placement, size, arrows, shapes, and connections to icons. In addition, these connections can be attributed to certain people, making it easy to remember the flow of conversation and the thought process behind an idea.

Communication is a challenge in any organization regardless of size or type, and being effective during the creation and implementation of change is necessary for survival. Considering the use of visualization as an additional means of communication can provide

clarity, understanding, and support of a project, situation, or assignment (Cloke & Goldsmith, 2002; Crane, 1993; Gross, 1993; Haudan, 2008; Feeley & Kathenes, 2007; Platts & Tan, 2004; Roam, 2008). According to Roam (2008) the visual and verbal presentation of information improves the possibility of clear and accurate communication (Roam, 2008). Pollitt (2003) gives an excellent example of the power of visualization. He writes:

Literally giving employees the “big picture” can clarify communication. The process can be likened to building a jigsaw puzzle, beginning by looking at the complete picture on the box, then putting in the corners and outside edges, and gradually filling in the middle until there is a complete replica. Imagine trying to work a jigsaw puzzle when given only one piece at a time. It would be easier to see the puzzle’s box cover so they could see how it all fits together. It takes an understanding of the whole, for the pieces to make sense. The big picture allows individuals to see that seemingly contradictory goals may actually complement one another. People feel as if they are part of something bigger than themselves when they see the whole. There is a sense of belonging, and they see how what they do contributes to the end result (p. 254).

Haudan (2008) realizes when there is no comprehension of the big picture, it is difficult to break down complex problems and make them more manageable. Furthermore, according to Haudan (2008), it is important to “recognize that in a picture, all the pieces are together and the situation can be viewed in its entirety” (p. 58). While a “written description is open to a wide range of interpretation, a picture leaves little room for misinterpretation and quickly conveys the exact meaning in a brief moment” (Haudan, 2008, p. 85). According to Tufte (2006), visual communication surpasses “language, culture, style, century, gender, and technology of information display” (p.10). Dyrud and Worley (2006) profess that the “eye perceives the visual before print and transcends the written word” (p. 397). Roam (2008) is a proponent for the use of visual techniques and tools for more efficient and effective problem solving. The “visual representation of a problem is a way to quickly look at the entire situation, intuitively understand

it, approach the challenge with confidence, and collaborate with others to reach a solution” (Roam, 2008, p. 3). In addition, “a visual representation enables us to see things differently, uncover ideas otherwise unnoticed, and present them to others in a way they genuinely understand” (Roam, 2008, p. 4).

Communicating for understanding, recall and comprehension. The key to executing a strategy is to have the people in the organization understand it (Platts & Tan, 2004). As the complexity of the business environment increases, effective communication and mutual understanding among managers is vital (Platts & Tan, 2004). A good diagram can convey instantly and memorably a relationship that would otherwise require an arduous and easily forgotten explanation (Platts & Tan, 2004). Communication is also getting the audience to both comprehend and recall the information, and more often than not, a clear and simple image is more effective than a visual inundated with data (Platts & Tan, 2004). In order to achieve positive results, Haudan (2007) believes it is imperative to give “a life to the strategy beyond the paper on which it was written” (p. 37). Discerning problems with simple drawings can clearly explain answers (Buzan, 1995; Platts & Tan, 2004; Roam, 2008; Tufte, 1990).

Visualization has the power to impact everyone in an organization. Visualization aids in the recall of information (McGinn, 2012; Zimmerman, 2008) and is helpful with different learning styles (Zimmerman, 2008). The reinforcement of information, processes, plans, and responsibilities within an organization (Roam, 2008; Zimmerman, 2008) can be a catalyst in improving organizational communication (Ball, 1999; Campbell, 2006; Elving, 2005; Gross, 1993; Haudan, 2008; Platts & Tan, 2004; Roam, 2008; West-Allen, 2008; Zimmerman, 2008). People connect and communicate through visuals (Haudan, 2008; McGinn, 2012), not strictly by the written or spoken word (Haudan, 2008; Margulies, 2002). Normally, there is more spoken or written communication conveying data, but visual storytelling is a powerful way to influence people (Haudan, 2008, p. 83-84). According to Fishman (1997) “If management has a hard time “getting it” how can they transfer it to others and translate it to results” (para. 6)? Ineffective

communicators believe employees “get it” once they have dispersed information about a project, however, the reality is being systematic and relentless in communication and implementation increase success (Miller, 2002). Kotter (1996) comments on the communication of a change effort:

A giant notebook outlining the change effort in mind-numbing detail did not contain a clear and compelling statement of where it was all leading. Employees become confused or alienated. Also, a sense of direction, but a plan too complicated or blurry is not useful. A useful rule of thumb: If you can't communicate the vision to someone in five minutes or less, and a reaction that signifies both understanding and interest, you are not yet done with this [vision and strategy development] phase of the transformation (p. 78). Communication seems to work best when it is so direct and so simple that it has a sort of elegance (p. 89). Such communication is challenging because it demands pronounced clarity of thought and a significant amount of courage (p. 90). Most people find that it is much more difficult to be clear and concise than complex and wordy (p. 90).

Visualization and Business Applications

The application of visual thinking techniques has been assessed to each of the following area in business: problem solving, producing ideas, writing reports, understanding processes, working in groups, unraveling complex text, making changes, and mining for knowledge (Dryud & Worley, 2006; Eppler, 2007; Roam, 2008; Tufte, 2006; West-Allen, 2008). Research by Eppler (2007) determined the significance of a visual perspective in collaboration is that it offers extraordinary potential and variety. Moreover, the practice of using different images, in addition to words, as part of a collaborative conversation, can be significant in a practical sense, and bring about unanswered research questions (Campbell, 2006; Eppler, 2007). Roam's (2008) strategy for improving business communications is through the use of hand-drawn pictures to solve problems and relay information. Roam's (2008) approach may seem outdated, but the technology of today used to communicate leaves us inundated with digital messages

and pictures. A simple hand-drawn picture gets noticed, and can be a welcome relief to the digital world (Eppler, 2007; Roam, 2008; West-Allen, 2008). Roam (2009) posits that pictures add enormously to our ability to think, to remember and to do. Roam (2009), also states “visualization enhances the management, proper steps, and available resources for solving strategy, project management, resource-allocation, and political and financial problems” (p. 4).

Doty (2007) used metaphor-based activities while conducting research at a Fortune 100 company. The goal was to help participants, verbally and pictorially, via drawings, share their perception of the organization and its leadership when faced with organizational change (Doty, 2007). The corporate world has become more accepting of different ways to meet today’s business challenges (Carey & Ligos, 2007), including the application of visual thinking and learning techniques (Craig, 2000; Novak, 1998). Taking a more creative approach to common challenges has been found to alleviate employee burnout, provide a new viewpoint on problems, often leading to innovative and surprising responses from participants which are instrumental in unique and unorthodox solutions (Carey & Ligos, 2007). Research has found replacing more conventional practices with mind mapping techniques are more effective in the development of certain business skills, and frequently lead to significant improvements in the business environment (Craig, 2000; Mueller, Johnson & Bligh, 2002; Williams, 1998). Some business leaders have developed an appreciation for the use of visual tools and techniques, including mind mapping, and have leveraged this business trend to consider their use in organizational planning, implementation, and communication (Buzan, 2005; Williams, 1998).

Visualization of a proposed plan can be a critical facilitator for employee motivation, enthusiasm and acceptance, ideally leading to positive change. Research compiled by Bresciani and Eppler (2008), resulted in classifying the effects of visualization as cognitive, emotional or social, and can be positive or negative. Although the evaluation of the use of information visualization is an underserved topic in literature there are several proponents of its efficacy, leading to continued developments and success in the field, particularly in the management of

organizations (Buergi & Roos, 2003; Eppler & Burkhard, 2006). The visual presentation of an idea or plan can reinforce the reason for the change, increase clarity and improve communication between individuals and departments. The true measure of the impact of visuals is subjective and intangible, leading some scholars to be suspicious of their true efficiency (Padda, 2009). The complex nature of change presents organizations with the challenge of finding new ways to organize, oversee, and define responsibilities (Beckhard & Harris, 1977). Visuals can be applied in various ways, but the answer for many Change Leaders is to implement the use of diagrams to represent the reasons for change, and the intensity necessary for the future of the organization.

Also championing visualization is Roam (2008) who states “visual thinking is how we use our eyes (and our mind’s eye) to look at a problem, see patterns and opportunities, imagine ways to manipulate those patterns to our advantage, and show those insights to others” (p. 4). Translating data or reports into a visual display of information supports the process of change by enabling the participants to understand the scope of the project (Fiol & Huff, 1992; Lohse et al., 1994), and see how it will impact their daily work (Fenton, 2007). Employees who are involved tend to take ownership of an upcoming project (Fenton, 2007).

Another aspect of visual thinking important to this study is the research that examines how effective visual thinking techniques are at improving achievement, retention, motivation and attitude; likely making it applicable to the challenges of organizational change (Bordia et al., 2004). According to Roam (2009) “thinking in pictures triggers more centers throughout the brain, and makes more connections than thinking in words alone” (p. 50). “Pictures help to discover, develop and share ideas, opening up a world of possibilities” (Roam, 2011, p. 303).

An example of non-traditionalism, Kim and Mauborgne (2005) chose an ocean as a metaphor for their vision for their book. Kim and Mauborgne (2005) took a risk and titled the book *Blue Ocean Strategy* in lieu of the working title *Value Innovation: The Strategic Logic of High Growth*. While ‘value’, ‘innovation’, and ‘strategy’ are powerful business concepts, describing what they look like can be a challenge (Roam, 2011). The image of an ocean

is “evocatively visual; vast, deep, and mysterious, as well as a symbol of freedom, endless opportunity, and adventure, a viscerally compelling description of value, innovation and strategy” (Roam, 2011, p. 216).

Primarily due to PowerPoint fatigue (McGinn & Crowley, 2010), visual techniques are becoming mainstream in many business actions today; people want something different, and most importantly, leaders want information to be effective, memorable, understandable, and create a sense of action. Mind mapping is one such technique being utilized in organizations to problem-solve, plan and manage projects, identify problems and negotiate (Crane, 1993; Gross, 1993; Higgins, 1995b; McGinnis, 2006; Pollitt, 2003; Rosenbaum, 2004; Sibbet, 2010).

There is a significant amount of literature on the specific visual techniques of concept mapping and mind mapping (Ausubel, 1960; Craig, 2000; Finch-Maeckelbergh, 2006; Novak, 1998). Research has found evidence that mind mapping techniques are more effective at developing certain business skills than traditional techniques (Buzan, 2005; Craig, 2000; Mueller et al., 2002). In sum, Haudan (2008) states “visualization allows [people] to carefully eliminating the fuzz that exists with just words” (p. 86).

Visualization is a mode of communication that is rarely used as a partner to a proven change model (Buzan, 1989; Mento et al., 2002; Mento et al., 1999; West-Allen, 2012). However, the opportunity that the use of visuals presents for an organization before, during, or after change is one in need of exploration. The subject of visual thinking is a broad area of study, but this dissertation will focus on visual thinking as it applies to the use of mind mapping as relates to the planning, communication, implementation, understanding, and sustainability of organizational change.

Mind Mapping

Mind mapping and human learning were discovered in the 1950’s, but groundbreaking research by Dr. Allan Collins and Ross Quillian was not completed until a decade later

(Rosenbaum, 2004). In 1974, the Buzan Organization, Ltd, trademarked the term Mind Map™ in the United Kingdom (Brinkmann, 2003; Buzan, 1989, 1996, 1997, 2002, 2005; DeBono, 1990; Hyerle, 1993; Feeley & Kathenes, 2007; Mandhyan, 2009b; Margulies, 2002; Pollitt, 2003; Roam, 2008, 2009, 2011; Sibbet, 2008). Despite Buzans' trademark on the name, it is commonly used in a generic context. Hereby, mind mapping is mentioned in this research as it refers to the term generically, and not always in reference to Mind Maps™ created by Buzan.

Mind mapping definitions. While many definitions for mind mapping exist, most describe the construction and/or function of a mind map as beginning with a key idea or situation in the middle of a diagram, and adding radial connections, identifying an association, relationship or link between ideas, people, and departments (Buzan, 1996; Feeley & Kathenes, 2007). Mind mapping has also been described as a tool to plan, structure, and explore thoughts or ideas, while remaining focused on the main issue (Pollitt, 2003). In addition, there are multiple terms attached to mind maps, the most common are: idea maps, bubble maps, cluster diagrams, cognitive maps, network maps, semantic nets, thought maps, thinking process maps, and thought diagrams. Williams (2012) defined mind mapping as a visual/spatial approach for mapping information, resulting in an organized arrangement of key words, phrases, and images representing an idea or concept. Similarly, Williams (1998) describes mind mapping as “a diagram of the structure of ideas in an associative manner, using graphics, color and key words as an alternative note-taking process” (p. 36), and as a strategy for training and learning. He indicated the use of mind mapping for training and learning is applicable since it encompasses multiple styles of learning, providing the possibility of everyone becoming a successful learner (Williams, 1998). Following this line of thinking, Goldberg (2004) indicates mind mapping is a brain friendly technique that relates to how the brain actually works. Hogan (1994) expands on common definitions by identifying mind mapping as “having the capacity to help people extract ideas by combining imagination, images, color, rhythm, dimension, and space with words, numbers, logic, and analysis” (p. 3). There are no exact guidelines for creating a mind

map, although some have established rules and basic guidelines (Buzan & Buzan, 1996; Wycoff, 1991). Margulies (2002) calls her maps “visual maps”, and creates them based on the situation, since she believes there are actually no rules. Mind maps have useful applications in a variety of settings, and can represent a person, topic, situation, department, or project to name a few (Buzan & Buzan, 1996; Wycoff, 1991).

Although mind mapping has been around “officially” since the late 1970’s, it has only become more popular in recent years. Due to the demand for attention from businesses through commercials, websites, videos, and print material, we are being inundated with stimuli. Mind mapping, particularly by hand, enables an escape from technology for a short period of time. Even crafting a mind map on software is not only different, but also more appealing and engaging than listening to a boring lecture or having a presenter read PowerPoint slides to the audience. In the 21st century our lives revolve around our electronics, and getting back to the basics may be just the ticket to re-engage great employees. The simplicity of mind mapping, whether it is drawn by hand or a software program (Hogan, 1994; Rosenbaum, 2004) is used, seems to be the allure of the technique, allowing time for thought and reflection, leading to better decision-making, and a candid look at behaviors that need addressing.

According to Mandhyan (2009b) mind mapping benefits include:

- Making note of only relevant words can save time.
- Review of information in graphical form can be scanned quickly.
- Allows for concentration on the most important issues.
- Key words are positioned according to significance, therefore very apparent.
- Well-defined and suitable connections are made between key words.
- Visually stimulating, colorful and multi-dimensional mind maps are easier for the brain to accept and retain than traditional linear notes.
- The brain finds it easier to accept and remember the visually stimulating, multi-

- colored, multi-dimensional mind maps rather than monotonous, boring linear notes.
- The process of mind mapping enables for the addition of new ideas, thus providing a constant and potentially limitless stream of thought.
 - The brain and a mind map work together with the brain's innate need for accomplishment or comprehensiveness.

Mind mapping and linear thinking. The left side of the human brain is mainly responsible for reasoning, words, calculating, categorizing, analyzing and listing, identified as linear thinking. The right side of the brain primarily performs tasks like multidimensionality, creativity, emotion, color, rhythm, shapes, geometry, and synthesis. Mind mapping engages both sides (Buzan, 1996), “connecting imagination and structure, pictures, and logic” (Svantesson, 1992, p. 44), resulting in increased productivity and memory recall. Attentiveness and openness increase when both sides of the brain are being used (Brinkmann, 2003).

The random and non-linear way of thinking is the natural thinking process of the brain, much like mind mapping. The open configuration of a mind map allows ideas to be incorporated into a map in progress or completed (Mandhyan, 2009b). An example of the limitations and challenges of linear and rational thinking is the statistics of some Total Quality Management (TQM) programs (Higgins, 1995a). The exclusion of non-linear, creative or innovative thinking is practically non-existent (Higgins, 1995a). Right-brain thinking is cogent with the creation of a mind map because the format allows the flow of information to jump from topic to topic as it arises (Buzan, 2002, 2005; Higgins, 1995b) and the configurations of a problem or situation can be seen in a way that is improbable with linear outlines (Margulies, 2002).

The rationale of mind mapping is based on the fact that the massive amount of information we are exposed to and take in generates responses, ideas, and opinions that cannot be expressed verbally, or written down as they occur (Mandhyan, 2009a). Mandhyan (2009b) describes a mind map as a “thought-grabber with eight or ten sets of limbs, capturing your thoughts quickly, giving you time to analyze and qualify them later, making your thinking

process more effective” (para. 4).

Guidelines for making a mind map. Mind maps are arranged hierarchically and while a mind map can be made to suit the situation and the individuality of the creator, the following have been identified as mind mapping rules and/or guidelines (Buzan & Buzan, 1996; Hugel, 1995; Svantesson, 1992):

1. Use a large sheet of unlined paper in landscape format.
2. Place the topic of the mind map in the center of the paper.
 - a. Topic should be presented in an eye-catching manner (i.e., a color image).
 - b. If a picture is not suitable for a particular situation, replace it with a keyword.
3. Draw branches from the topic in the center, representing each main idea.
 - a. Main ideas can be identified by printing keywords on each branch line.
 - b. The order of the branches is not important, unless the situation warrants.
 - c. Write only one word per line (keyword), capturing the thought, not the details.
4. From the main branches add lines to represent subtopics.
5. Include the use of colors, images, sketches and symbols.
6. Additional mind mapping guidelines. (Mandhyan, 2009b)
 - Keywords are sufficient to identify ideas on a mind map, since 10% of the words in texts are necessary.
 - The order of a mind map (central idea to branches connecting outward) goes from abstract to concrete, and from general to specific.
 - Each mind map has a distinctive appearance and a strong visual appeal, making mind maps a valuable memory aid.
 - The open structure of a mind map, allows for individual contributions to be integrated, summarizing the ideas of multiple individuals.
 - It is common for individuals to develop a personal style for mind mapping fostering creativity by altering forms, shapes, colors, symbols, or images.

Mind mapping applications. Mind mapping has multiple uses for most any situation, be it personal or professional planning; including clarifying goals, improving communication by displaying connections between individuals, departments and processes, diagnosing problems and risks in situations and groups, problem-solving and decision-making in business and education (Buzan, 2002; Eppler & Burkhard, 2007; Haudan, 2008; West-Allen, 2012). Additional reasons scholars endorse this visual technique is because mind mapping can generate a large number of ideas, can be interpreted at a glance, and transcends language barriers, through the use of images and in a colorful manner, all on a single sheet of paper (Buzan, 1996; Carey & Ligos, 1997; DeBono, 1990; Dyrud & Worley, 2006; Eppler & Burkhard, 2007; Farrand, et al., 2002; Finch-Maecklebergh, 2006; Gross, 1993; Haudan, 2007; Hogan, 1994; Mandhyan, 2009a; Margulies, 2002; Mento et al., 1999; McGinn, 2012; Pollitt, 2003; Rosenbaum, 2004; Sibbet, 2008; Tufte, 1990; West-Allen, 2012). Mind mapping can lead to the questioning of assumptions and conventional ways of thinking, leading to creative conversations (Buzan, 1996; Farrand et al., 2002; Gross, 1993; Margulies, 2002).

One of the many benefits of mind mapping is that there are multiple points of view on one piece of paper, thus emphasizing interrelationships rather differences, leading to the development of an image of the problem, allowing for concentration on possible solutions (Ball, 1999; Hogan, 1994; Margulies, 2002). Mind mapping makes knowledge visible by displaying information in a more accessible manner, and can help to simplify complex situations (Buzan, 1996; Eppler & Burkhard, 2007; Finch-Maecklebergh, 2006; Mento et al., 1999; Rosenbaum, 2004; Vail, 1999). Given the importance of understanding, and the communication necessary for a change initiative, such attributes can be invaluable (Buzan, 1996; Eppler & Burkhard, 2007; Finch-Maecklebergh, 2006; Mento et al., 1999; Rosenbaum, 2004; Vail, 1999). There have also been studies conducted to test the efficacy of mind mapping when it is applied to specific tasks such as marketing (Ericksson & Hauer, 2004; Margulies, 2002), and executive education (Mento et al., 1999).

Mind mapping successes. Mind maps have helped individuals and businesses reach their goals (Buzan, 2005). Buzan's (2005) examples of recent success stories include:

- Con Edison, implemented mind mapping to strategize the restoration of power to Manhattan after 9/11.
- Boeing design engineers brainstorm at meetings using mind mapping.
- John Scully, partially responsible for the success of Apple computers, documented his research and ideas for their new look using mind mapping.
- Mex, a restaurant chain in the United States, was brought back from the verge of bankruptcy using mind mapping.

Mind map limitations.

- Mind maps are very individual graphic representations and may often appear confusing.
- Individuals have differing connotations of the same topic, resulting in contrasting mind maps.
- This limitation suggests that the user of the mind map should also be the creator or a member of the user group.
- Each branch of a mind map has multiple branches connected to it, and additional ideas are added denoting specific connections, increasing the possibility of complete relationships.

Mind mapping and learning. Individuals and organizations can utilize mind mapping to enhance creativity and productivity as well as improve learning and efficiency (Buzan, 1989). Mind mapping is a system that can be used to capture ideas and perceptions on one sheet of paper, and can be used in virtually every endeavor where thought, planning, recall or creativity are involved (Buzan, 1989).

Leaders must understand impending change requires recipients to be ready, willing and able to complete the project (Miller, 2002). Leaders are privy to countless pieces of advice from

experts and scholars, most of which addresses change as being analytical and logical (Miller, 2002). Fishman's (1997) viewpoint of change rings true in any organization, about any type of change, and regardless of change leadership experience. According to Fishman (1997),

If you read the academic literature, too often change comes across as a remarkably bloodless activity: establish a vision, design the program, and paint by the numbers. We interrupt this program to deliver a dose of reality: it doesn't work that way. In the real world of change, leaders desert you, your staunchest allies cut and run, opposition comes from places you least expect, and your fiercest opponent can turn out to be your most vital supporter. In other words, when emotions are running high and the stakes are even higher, people act like people. (para. 7).

Mind mapping software. There are numerous mind mapping software programs available, and although there are a limited number that are free, it is important to consider the objectives, needs, cost, type of platform, and expert reviews before making a selection (<http://www.mindmapping.com/mind-mapping-software-tips.php>). Checklist for the evaluation of mind mapping software:

- Ease of use
- Look and feel
- Variety of templates available
- Number of different layouts (Mind Map, Top-Down, Left-Right, Outline, Timeline, Gantt chart, etc.)
- Integration with MS Office (import/export to Word, PowerPoint, Excel, Outlook)
- Sharing of files with attachments
- Handling of task information and project management rules

Free mind mapping software. Dozens of free mind mapping tools are readily available in the form of software, tablet and smart phone applications, allowing for the construction of basic mind maps. Sharing, collaboration, and storage are available for many of the free web-

based programs. A consideration when evaluating a program that allows storing is the retention of confidential information may conflict with company security policies. Another possible hindrance when considering free mind mapping software is the need for a high-speed Internet connection for maximum efficiency. Beware of software companies that entice a prospective customer into using the basic version and soon finding it necessary to pay a monthly fee in order to access advanced features.

Commercial mind mapping software. When using mind mapping in a company as a productivity, planning, organizing, or communication tool, consider how the mind map will function once it is created. Considerations include the ability to convert the file to a Word document, save the mind map for later access, multiple user permissions and multiple document creation without re-entering data, most professional desktop mind mapping applications integrate with MS Office for PC and/or MS Office for Mac, however the quality varies significantly depending on the office tool.

Summary

It is clear from this review of the literature that there is a great deal of business interest in the use of visualization techniques, specifically mind mapping. While there has been a high level of interest in leveraging visual tools in many facets of business, research has revealed little evidence of their widespread use in organizational change (Platts & Tan, 2004). This research will explore the use of one type of visualization, mind mapping, to enhance, improve, and clearly communicate all aspects of a change project (Abbott, 1992; Arlbjorn, 2011; Bresciani, Blackwell & Eppler, 2008; Buzan, 1989, 1996; Buzan & Buzan, 1996; De Bono, 1990; Mento et al., 2002; Mento et al., 1999; Rosenbaum, 2004; Sibbet, 2010; West-Allen, 2012; Zimmerman, 2008). The use of mind mapping as a tool in conjunction with, or as a partner to an organizational change initiative, has the possibility to produce collaborative conversations between and among leaders, managers, departments, and individuals (Arlbjorn, 2011; Buzan, 1989; Jick, 1990; Mento et al., 2002; Mento et al., 1999).

The discussion of critical need for organizational change and its history of dismal outcomes can be attributed to many factors, one of the most frequent of which is communication. The entire organization must be in sync with each aspect, step, and movement of the change process, and such action is dependent on the chief implementers, the employees. Without their buy-in, failure is almost certain. So why so much emphasis on how or whether the leader and recipients resist, accept, embrace, express enthusiasm, or adopt a genuine attitude to make the project a success? Research indicates the greatest difficulties, roadblocks, challenges, problems and undoings, are related to communication. Effective communication must exist between the leaders and the followers, and by utilizing an additional method in which to enhance communication, it is plausible communication can be improved. One method of communication we are all familiar with, but do not regularly consider as pertinent as traditional methods (memos, email, reports, meetings, etc.) is that of visual communication. Understanding the wide range of possibilities that exist by implementing this additional method can be a powerful aid and/or solution to many aspects of organizational change. The following research specifically addresses the use of mind mapping as the mode of visual communication considered to supplement traditional organizational change communications.

Chapter 3: Methodology

Introduction

Any new methodology suggested for the practice environment raises both excitement and resistance. The purpose of this research was to explore attitudes toward change of those responsible for and participants of organizational change, as well as the experience, familiarity, and consideration of the use of mind mapping for change to make it easier and/or more successful. The data was gathered using an electronic survey process measuring attitudes about change as well as about mind mapping as a tool for supporting change efforts.

Research Question

This dissertation focuses on one central research question: What is the change readiness level of individuals who show an interest in mind mapping and/or organizational change, and their attitude toward the use of mind mapping as a tool for enhancing/improving change management practices?

Data was gathered from individuals who have indicated an interest in mind mapping and/or organizational change. This research provides information in which to examine and understand the attitudes of and the preparedness for organizational change experiences of practitioners, as well as those familiar with mind mapping. Such data will help determine the interest in considering a different method for designing, communicating, and implementing change will be valuable for organizational practices.

Research Methodology

Babbie (2007) identifies three common purposes of social science research: exploratory, descriptive, and explanatory. For this research, an exploratory design was used, collecting data virtually from a non-probability sample using network sampling techniques. Shields and Tajalli (2006) categorized exploratory or preliminary research with what they identified as the micro-conceptual framework, “working hypothesis”, which signals that the concept is in its introductory stages. The working hypothesis is an essential element in Dewey’s (1938) theory of

inquiry. According to Dewey (1938), working hypotheses are a temporary way to continue the research and uncover additional crucial details. In this study, the working hypothesis is that mind mapping can be an effective technique for communicating and implementing change efforts.

Measuring the attitudes of both participants and leaders toward organizational change, providing a brief explanation and an example of a mind map as an alternative method to communicate and implement change, and the opportunity to receive feedback regarding the use of a mind map, has the possibility to provide the field with valuable information. Concentrating on the attitudes of those with a defined interest or experience in organizational change and/or mind mapping, and introducing an alternative way to experience change may inspire Change Leaders, or cause them to be resistant, to a different way of introducing and implementing change. However, the availability of a seemingly endless number of change models and tools may hinder the possibility of the participants considering an alternative method.

Today, in order to stay competitive, organizations must be cognizant of the need for change (Armenakis & Bedeian, 1999; Cascio, 1995) and that past change experiences affect readiness to change (Axtell et al., 2002). Kelly and Amburgey (1991) found organizations are likely to tackle changes or utilize methods based on past experience. Therefore, there is a need for exploratory research to add to the current body of knowledge, by assessing the attitudes of past organizational change experiences when designing, planning, and implementing future change initiatives.

Target Population

There were two targeted populations for this research, individuals who have experience with organizational change and/or those with an interest in mind mapping. The population was contacted through two website sources, LinkedIn Connections and Group members and Facebook Pages, which represent companies, institutions, organizations, businesses and communities. As this is an abstract population, a network sampling process was used to solicit qualified participants. An invitation to participate in the research was given via the researcher's

LinkedIn and Facebook accounts, selecting individuals and members of groups or organizations with an identified interest in organizational change and/or mind mapping.

LinkedIn connections and group members. The abstract population of individuals from LinkedIn consisted of the researcher's individual Connections and individuals who are members of Groups with an identified interest in organizational change and/or mind mapping. LinkedIn is a professional networking website founded in 2003, connecting professionals around the world, allowing members to access people, jobs, news, updates, and insights about industry, organizations, schools, and non-profit institutions (<http://help.linkedin.com>).

LinkedIn Connections are individuals, who, by invitation only, have the contact details of individuals with whom they have some type of relationship, typically professional (<http://help.linkedin.com>). The LinkedIn Connections targeted were individuals selected by the researcher, who according to their profile, were associated with or have an interest in organizational change and/or mind mapping. The researcher requested permission to connect with individuals who met those requirements. Those that granted permission became one of the researcher's LinkedIn Connections.

LinkedIn Groups consist of individuals who are in like industries or have similar interests, and provide a platform where those individuals can interact with one another by asking or answering questions, seeking employees or employers, establishing business connections, or looking for expertise in a particular area (<http://help.linkedin.com>). A LinkedIn Group can be about any topic, interest, business, or concern. Any individual who is a member of LinkedIn can create a LinkedIn Group. An individual, deemed the "owner", creates a Group, and explains the purpose, with the expectation of attracting individuals and organizations to join the Group. LinkedIn Groups acquire members using one of two methods as determined by the founder; requiring individuals request to join the group, or creating an "open" Group. An open LinkedIn Group is one in which anyone can join without seeking permission. Group membership entitles the individual to participate in discussions, ask questions, or simply acquire/gather information

published by the site owner and members. The LinkedIn website is accessible worldwide, thus only groups that were described in English or designated as United States entities were selected to eliminate the possibility of any language barrier on the part of the researcher or participants.

The LinkedIn Groups were selected if their posted description and purpose pertained to organizational change and/or mind mapping in some context. Identified groups included organizations and interest groups in varying industries.

Facebook pages. Facebook is a social networking website that connects people with friends and others who work, study, live around them, or any part of the world (<http://www.facebook.com/about>). Facebook offers two types of Pages, one for communities or groups, and the other for businesses, brands, and organizations. Community or group Pages are unofficial representatives that provide information about an organization, subject matter or celebrity (<https://www.facebook.com/help/281592001947683/>). A Page is a format where businesses, brands and organizations can share pictures, stories, news, and information (<https://www.facebook.com/help/281592001947683/>). It is important to note that only official representatives can create a Page for an organization, business, brand or public figure. In addition, a Page can be created and limit access to certain individuals or organizations, and/or require acceptance to join a group based on the intended audience (<https://www.facebook.com/help/281592001947683/>).

Facebook Pages, Groups, and Communities were invited to participate in this research if the posted description and purpose pertained to organizational change and/or mind mapping in some context. Identified groups included organizations, communities, and interest groups in varying industries. The Facebook website is accessible worldwide, however only groups that were described in English or designated as United States entities were selected to eliminate the possibility of any language barrier on the part of the researcher or participants.

Qualifying parameters. The potential participant was provided with information about the study, and a link to the electronic survey administration tool (SurveyMonkey) was provided. Qualifying criteria included being a member of the researcher's LinkedIn Connections, or a

member of a LinkedIn Group or Facebook Page specifically pertaining to organizational change or mind mapping. Those who met the qualifying criteria and agreed to participate proceeded to the three-part survey process.

Data Gathering Process

The data was collected for this research entirely through a virtual process using SurveyMonkey. SurveyMonkey is an online survey service that allows a user to design a custom survey and collect and analyze data (<http://www.surveymonkey.com>). The survey was designed so the responses of each participant were completely anonymous. The data collected was used solely for research pertaining to this dissertation, and was deleted from the SurveyMonkey website at the conclusion of the research to ensure anonymity and confidentiality. Based on the parameters outlined, qualified participants received access to a demographic survey, the Organizational Change Readiness Assessment (OCRA) (Russell, 2010), and the Mind Mapping and Change Questionnaire.

Qualified participants completed the electronic survey process in three distinct parts, each directly relating to the purpose of this research (Appendix A). The first part was completing the Demographic Questionnaire. The second part was completing the Organizational Change Readiness Assessment (OCRA), which evaluates readiness for change through organizational support, cultural, change environment, and employee attitudes and behaviors (Russell, 2010). The third and final part, was the completion of the Mind Mapping and Change Questionnaire. This part of the survey contained a brief definition and explanation of mind mapping with a specific example, including past and possible uses, and a series of open-ended questions about organizational change and the possible application of mind mapping to the process. The online process was designed so the participant could pause the program and return to it at a later time.

Survey Instruments

Part 1: Demographic Questionnaire. The participant was asked demographic questions solely for research coding purposes.

Part 2: The Organizational Change Assessment (OCRA). The participant was asked to complete the OCRA survey, a tool that evaluates readiness in four areas or components; organizational support, cultural, change environment, and employee attitudes and behaviors (Russell, 2010). The four components support the importance of evaluating both individual and organizational readiness to change (Russell, 2010). The OCRA has proven to be a valuable tool for leaders specifically at the beginning a change initiative. The OCRA helps increase understanding and handle issues that are common barriers in the implementation of change (Russell, 2010).

Each component contained seven questions pertaining to the specific component category. The organizational support component considers factors such as vision clarity, the extent to which the employees' voices are heard or responded to, and the quality of communication in the organization (Russell, 2010). Examples of the cultural component include examining elements of trust, the actions of individuals under stress, and the level of collaboration and teamwork to name a few (Russell, 2010). The change environment assesses issues such as the clarity of the change communication, and the organization's change experiences and outcomes (Russell, 2010). Lastly, the employee attitudes and behaviors component investigates the presence of innovative and/or engaged employees, and the degree of employee openness to change (Russell, 2010).

According to Russell (2010) the four components enable the assessment of Change Leaders' perception of the level of organizational change readiness. Such an assessment has the may offer insight into the probability of successful change. Identifying which component(s) contribute to high levels of readiness provides an organization with valuable information when planning a change initiative, as opposed to predicting change results (Russell, 2010). The complete OCRA survey and how it is scored can be found in Appendix A.

Part 3: The Mind Mapping and Change Questionnaire. The third and final part of the survey process contained a brief definition and explanation of mind mapping and how it can/

has been used as a tool for supporting change. The participants were then asked to review the explanations and the visual. The Mind Mapping and Change Questionnaire, asked open-ended questions about the possible role of mind mapping as a tool for organizational change. The Mind Mapping and Change Questionnaire provided the qualitative element of the research.

Reliability and Validity of Survey Instruments

The OCRA is a survey instrument proven to be reliable and valid based on research conducted by the developer (Russell, 2010). The Mind Mapping and Change Questionnaire was designed based upon the literature about mind mapping and organizational change, providing initial face validity. The three distinct parts were designed into a single survey and submitted to two colleagues with subject matter expertise to validate the content.

To ensure reliability of the entire survey process, a pilot study was conducted with a few colleagues to ensure that the virtual process worked as anticipated and provided the needed data. The pilot process also provided the estimated time needed for completion.

Human Subjects Considerations

It was of the utmost importance to the researcher that the study posed no more than minimal risk to the participants. The use of the reliable and valid OCRA, and the Mind Mapping and Change Questionnaire, as well as the collection of data entirely through an online administrator, aided in the protection of the identity of participants.

The adult subjects participated of their own free will by choosing to respond to an invitation posted on the researcher's LinkedIn account. Participating in and completing the Demographic Questionnaire, the OCRA, and the Mind Mapping and Change Questionnaire brought minimal risk to the participants.

Each instrument was designed specifically to eliminate a conflict with the participant's current employer by completing the OCRA are based on a previous change experience(s) minimizing the risk of a conflict or disagreement with the participant's employer regarding the responses, should their identity be compromised.

Gathering all data through an online process using a third party survey instrument was an additional measure taken by the researcher to increase the anonymity of the participants. The IP addresses of the responding participants were replaced with a simple subject ID by the Survey Administrator prior to the data being transmitted to the researcher. Guaranteeing 100% anonymity was not possible, but every precaution was taken by the researcher to do so. While a modicum of demographic information was required, no data was collected about the company, industry, or job position of the respondents.

An additional foreseeable risk was the imposition on the participant's time. The participant was able to opt out of the survey at any point in the process in the event the use of the time need to complete the survey became a hindrance.

Subsequently, neither the information gathered, nor the analysis thereof, was contingent upon a particular type of organizational change the participant's were involved in, nor were the questions that followed the mind map example. Since the responses were collected online, only the participant was able to share his/or her responses, and once the process was complete, the information was anonymous and only accessible to the researcher. Any information that alluded to a participant's identity was redacted.

The criteria that was considered in order to obtain Exempt status was met in accordance with the guidelines identified in the Protection of Human Subjects Publication, 45CFR 46.101(b) (1)-(6) (<http://www.hhs.gov/ohrp/humansubjects/>). Specifically, this research qualified under category 2 and approval was received from the University, GPS-IRB (Appendix C).

Assumptions

This study was designed with the assumption that mind mapping can be used in conjunction with a chosen change model or method, or as a conduit to design, communicate, and/or implement organizational change. It was assumed that many individuals are uncomfortable with change, and such an attitude may make it difficult to consider embracing a different way to experience and implement change. It was also assumed that the initial questions presented to

the researcher's LinkedIn connections were answered honestly, providing a qualified sample of participants. It was also assumed that the participants answered the Demographic Questionnaire, the OCRA, and the Mind Mapping and Change Questionnaire honestly and candidly.

Limitations and Delimitations

The LinkedIn and Facebook websites are accessible worldwide, however only individuals, groups and pages that were described in English or designated as United States entities were selected. This research has a small sample of individuals due to the time needed to complete the research activity. In addition, limiting the invitation to the researcher's professional LinkedIn network and on Facebook pages indicating an interest in mind mapping and/or organizational change may not have provided a full-range of individuals who involved in mind mapping or organizational change activities. While LinkedIn Connections, LinkedIn Group members, and fans of Facebook pages that indicated an interest in mind mapping and/or organizational change were invited to participate in the study, not all who qualified chose to participate.

Data Analysis Processes

The survey responses were analyzed with frequency distributions and a readiness score was calculated according to OCRA guidelines (Russell, 2010). Responses to the open-ended items were reviewed by the researcher, and a content analysis process was used to arrive at response topics and themes. The coded data was then reviewed by an experienced colleague to ensure reliability, defined by Creswell (2009) as "intercoder agreement" (p. 191). The validity strategy used was peer debriefing, and Creswell (2009) describes this strategy as "selecting another person to review the data and ask questions about the study to ensure the interpretation is consistent with the opinion of another reviewer or scholar" (p. 192).

Summary

This dissertation focused on one central research question: What are the attitudes of individuals with toward the use of mind mapping as a tool for enhancing or improving organizational change management practices?

Gathering data from individuals who show an interest in organizational change, mind mapping or both, and introducing an alternative way to have experienced the change, may inspire Change Leaders and participants, or cause them to be resistant to, a different way of introducing and implementing change. The research design and methodology of this study was selected to add to the body of knowledge surrounding the challenge of successful organizational change, as well as the attitudes toward the use of mind mapping in conjunction with organizational change.

This research shows the level of change readiness of individuals who have indicated an interest in organizational change, mind mapping or both, and the attitude toward considering the use of mind mapping as a primary or secondary way to plan, implement, and communicate change. The intent of gathering such data and the analysis thereof is to increase the possibility of improving the instance of successful and lasting organizational change through the use of an additional change method.

Chapter 4: Results

Introduction

The targeted population for this study included individuals who identified themselves as having an interest in mind mapping and/or organizational change. They were recruited using various virtual settings including certain LinkedIn Groups, such as Biggerplate Mind Mapping Community, Change Consulting, Change Management Institute, IDECYS Mind Mapping Decision, International Creative Trainers, Leadership Think Tank, and Master Mind Mapper, to name a few. The survey was open for 10 days, and received 104 responses, netting 87 completed surveys. Respondents were categorized into two groups: Change Leaders and Change Participants. The findings are reported as described in this chapter and some interpretation and relevance to literature is included along with actual results.

Analysis Process

The quantitative data from the two subject groups, were analyzed separately, as well as together, using the OCRA survey tool (Russell, 2010), detailed numerical data provided by the survey administration tool (Survey Monkey), and frequency distributions were prepared by the researcher. Cumulative data for each subject as well as item frequency distributions. Frequency distributions were calculated from change leader and change participant groups and reviewed collectively. The information from these calculations provided data which led to a more in-depth analysis of specific thoughts, opinions, and viewpoints unique and similar to each group. The evaluation of this data provided a telling comparison leading to a greater understanding and conclusions regarding mind mapping and change from the perspective of each group.

Organizational Change Readiness Assessment (OCRA) survey. Utilizing the framework recommended by Russell (2010), the data collected from the OCRA survey was tabulated using a Likert scale. This resulted in an overall readiness score. The scores were then compared by sample sub-group.

Table 1

Likert Scoring of the Organizational Change Readiness Assessment (OCRA)

Likert Scale	Strongly Disagree	Disagree	Slightly Disagree	Not Sure	Slightly Agree	Agree	Strongly Agree
Value	-3	-2	-1	0	1	2	3

OCRA Likert-type Rating Scale (Russell, 2010).

Table 2

Organizational Change Readiness Assessment (OCRA) Readiness Scale

Score	Readiness Level
0 or negative number	Not ready for change
1-27	Low
28-56	Moderate
57-84	High

Note. Adapted from “Measuring Organizational Change Readiness” [Organizational Change Readiness Assessment Survey], by J. Russell, 2010. Copyright 2010 by Russell Consulting Inc. Reprinted with permission.

Readiness, according to Russell (2010), is being responsive to change both cognitively and emotionally, and is apparent through positive openness regarding the change attitudes, beliefs, feelings, and intentions of stakeholders. An organization that reaches this state is more likely to be receptive and accepting of the change (Russell, 2010). The evaluation of change readiness includes the “cognitive and emotional state of leaders, managers, and frontline employees, and multiple dimensions related to the context and organizational atmosphere in which the change takes place” (Russell, 2010). A critical step in the complex journey toward a successful change is the assessment of an organization’s readiness for change is an important (Hilde, 2011). Research by Russell (2010), found organizational support, organizational culture, the change environment, and employee attitudes and behavior to be the dimensions with the highest significance in the evaluation of change readiness. Assessing readiness levels by examining multiple components can lead to conversations about barriers than may impede the success of a change initiative (Hilde, 2011). The OCRA survey asks a series of seven

questions addressing specific issues relating to each component, resulting in a readiness score comprehensively measuring change readiness.

Interpretation of OCRA scores. An overall readiness score of less than zero reveals the individual is not ready for change and an attempt to successfully implement a change effort will likely fail. While some objectives may be reached, those that do not, coupled with the high level of resistance, create a barrier for overall defeat, therefore, it is recommended that attempting to initiate a change strategy should be reconsidered (Russell, 2010).

An overall readiness score between 1 and 27, is identified as a low level of change readiness, and is prone to considerable challenges for a successful change initiative. However, the examination of an individual or organization with a moderate level of readiness may meet with success by identifying and addressing specific issues (Russell, 2010).

An overall readiness score between 28 and 56 indicates a moderate level of change readiness. A change initiative is more apt to meet with success by careful planning and implementation. It is important to consider the dimensions with low levels of change readiness, and monitor those issues to improve the chances of a successful change (Russell, 2010).

An overall readiness score is between 57 and 84 signifies that the organization has a high level of change readiness. If leaders and employees are also cognizant and receptive to the challenges that all change initiatives can bring, there is a much greater chance of success (Russell, 2010).

Summary of Demographic Information

The target population was individuals from LinkedIn Groups that showed an interest in mind mapping and/or organizational change. Change Leaders and Change Participants were asked to provide their age. Only the Change Leaders were asked the primary industry in which they worked and their years of experience in Change Leadership.

Industries Represented

The industries that represented over 5 % of the respondents are shown in Figure 1. The other industries include, aerospace, architecture, call centers, character and ethics development, construction, energy, engineering, entertainment, financial, government, manufacturing, non-profit, utility, and venue management. The age of all the respondents are shown in Figure 2, and the Change Leaders' years of experience are displayed in Figure 3.

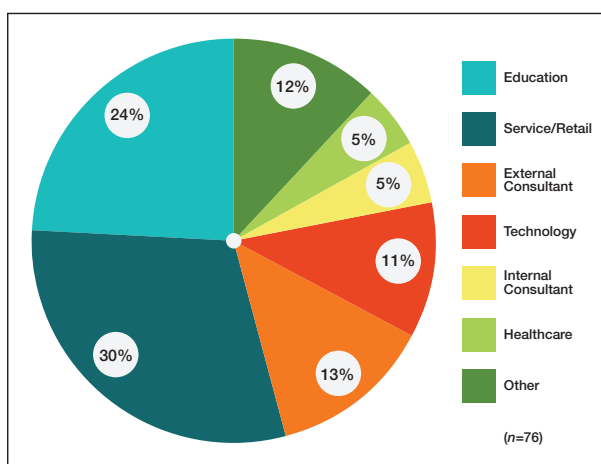


Figure 1. Industries represented.

Years of Change Leader Experience

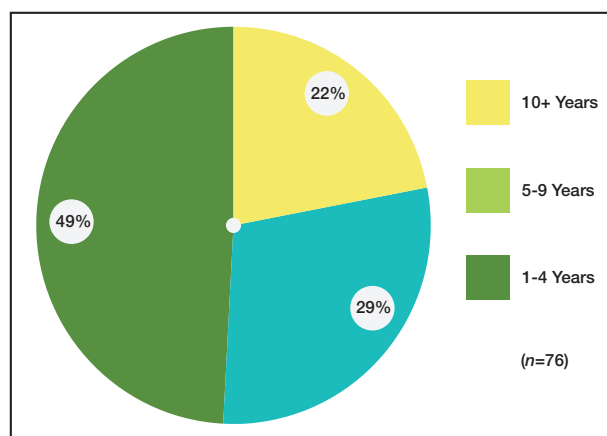


Figure 3. Percentage of Change Leaders and years of experience.

Age Ranges Represented

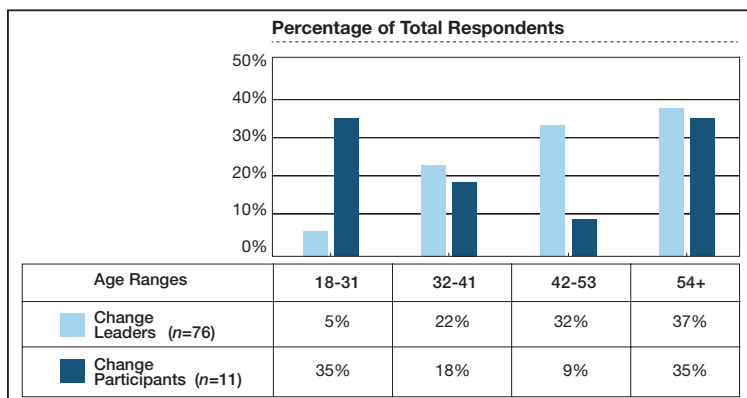


Figure 2. Ages of Change Leaders and Change Participants.

Organizational Change Readiness Assessment (OCRA) Results

The first consideration was to calculate the OCRA scores separately by group.

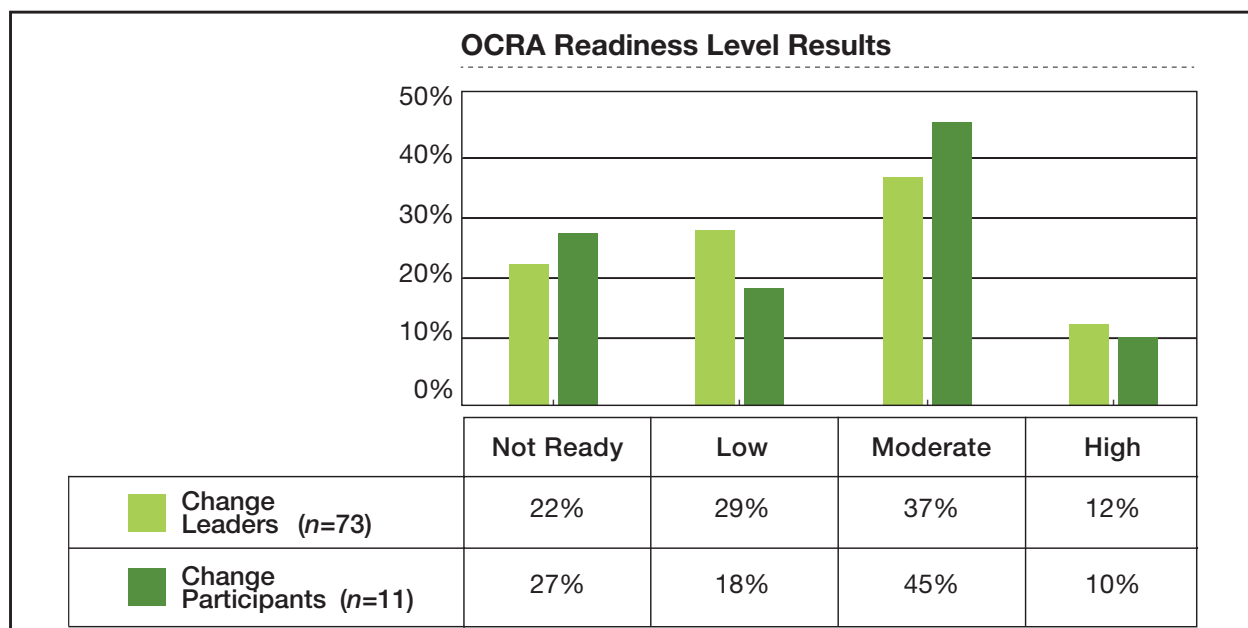


Figure 4. Change Leader and Change Participant OCRA readiness level results.

The second consideration in the analysis of the OCRA data collected was to look at the results in the context of the four dimensions identified by Russell as the most significant. The OCRA is designed to measure readiness levels, using 28 survey items, and totaling the individual scores using the scale in Table 1. The following 11 survey items are not readiness scores, but the scale responses from each sub-group, shown as a percentage. Each of the following survey items were selected because they indicate significance, positive and/or negative, to the purpose of this research. The four components are organizational support, cultural, the change environment, and the employee attitudes and behavior.

OCRA organizational support component results. The first dimension is organizational support, which includes issues concerning employee participation levels, training practices and results, as well as the quality of communication (Russell, 2010). Three items on the survey make up this dimension. One item addressing shared vision (Figure 5), one item focusing on organizational training and development (Figure 6), and one item concentrating on communication (Figure 7).

Survey item. The organization’s vision is truly a “shared” vision in that employees at all levels understand, value, and work toward accomplishing this vision through their daily work.

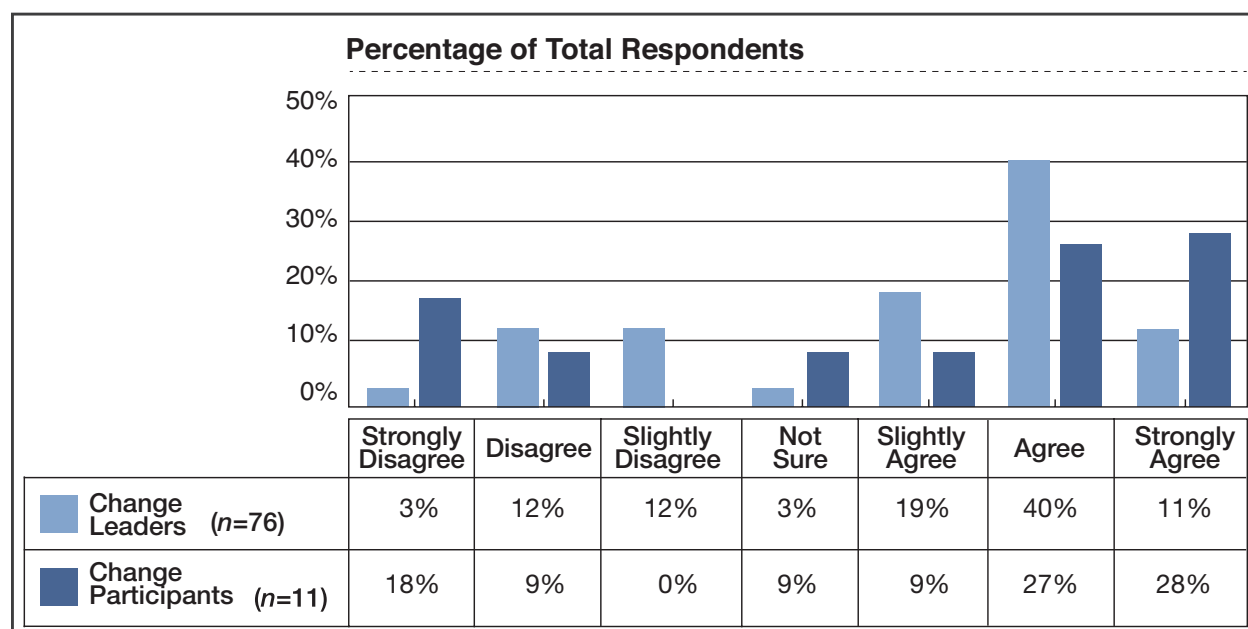


Figure 5. Frequency distribution for survey item: The organization’s vision is truly a “shared” vision.

One element of a successful organization depends upon employees knowing and understanding the organization’s goals and how they can contribute to achieve them (Kotter, 1996). A significant percentage of all Change Leaders (70%) agree on some level, however, the most telling and concerning responses from this sample were the percentage of Change Leaders (27%) who answered on the disagree side of the scale. Interestingly, the Change Leaders and Change Participants had the same overall percentage of subjects answering with some level of disagreement, and nearly the same level of agreement (64%).

Survey item: Employees view the organization’s training and development programs as effective and supportive of change-driven training needs.

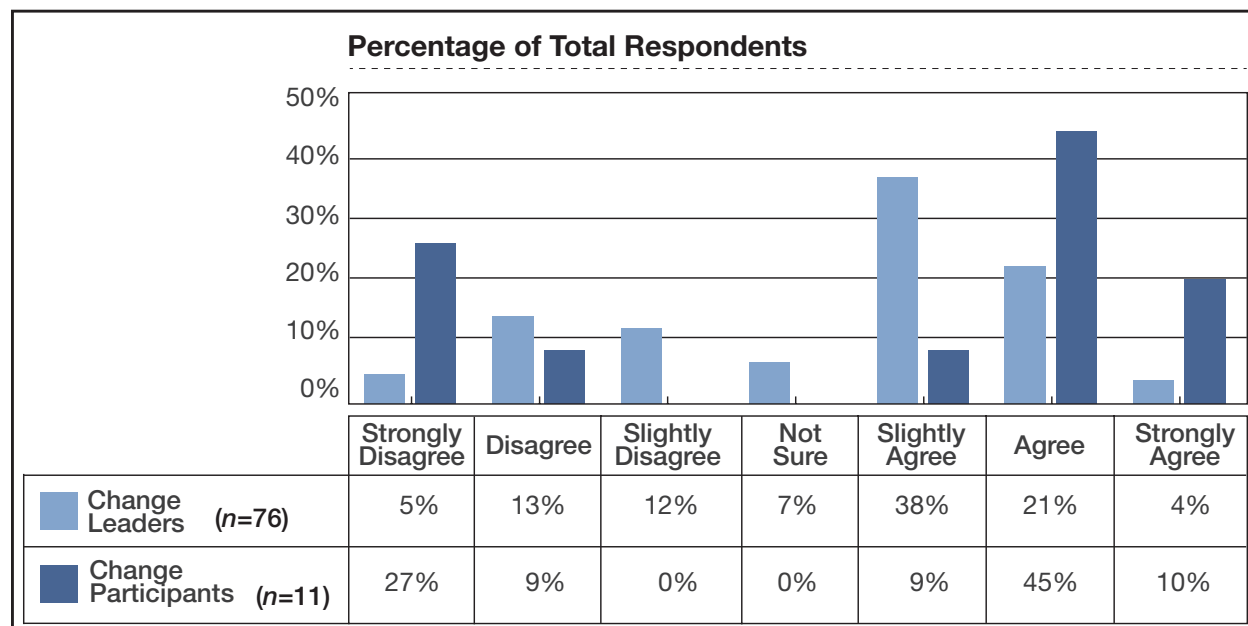


Figure 6. Frequency distribution for survey item: Employees view the organization’s training and development programs as effective and supportive.

Combining all levels of agreement, shown in Figure 6, both the Change Leaders and Change Participants had almost identical levels of agreement (63% vs. 64%) toward the organization’s training and development programs. While these results are encouraging, the opposite side of the scale for Change Leaders (30%), and Change Participants (36%), indicates a gap warranting concern. Improper implementation of any type of training can be costly to an organization, and can increase the likelihood that the investment in training will be viewed as a poor one.

Survey item: The organization effectively uses multiple communication channels to routinely and effectively communicate with employees.

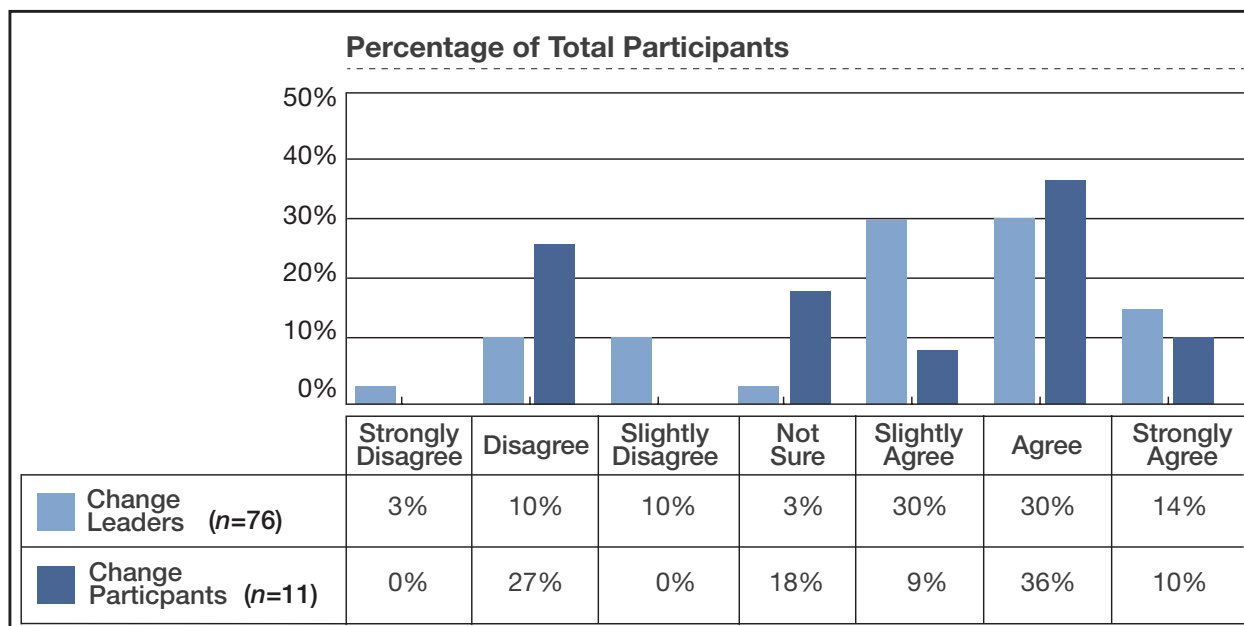


Figure 7. Frequency distribution for survey item: The organization effectively uses multiple communication channels.

Today there are multiple methods in which communication can be delivered, but are they being used effectively? The data gathered for this item, shown in Figure 7, is telling for two reasons. While it is true 55% of Change Participants fall on the agree side of the scale, the 27% who slightly disagree and the 18% who are not sure, are equally as important. It is possible, based on the data collected from this survey item that effectively utilizing multiple communication channels could increase the level of agreement. The dissemination of information does not guarantee its receipt. The use of communication channels appropriate for each audience (i.e. department, level of employee, location, etc.) and how information is typically received must be taken into consideration and coincide with one another to improve the chances of successful communication.

OCRA organizational culture component results. A few of the issues included in the culture component of the OCRA survey are teamwork, active participation, and clear understanding to increase the chances of successful change (Russell, 2010).

Survey item: When the going gets tough here, people tend to stick together and help each other out.

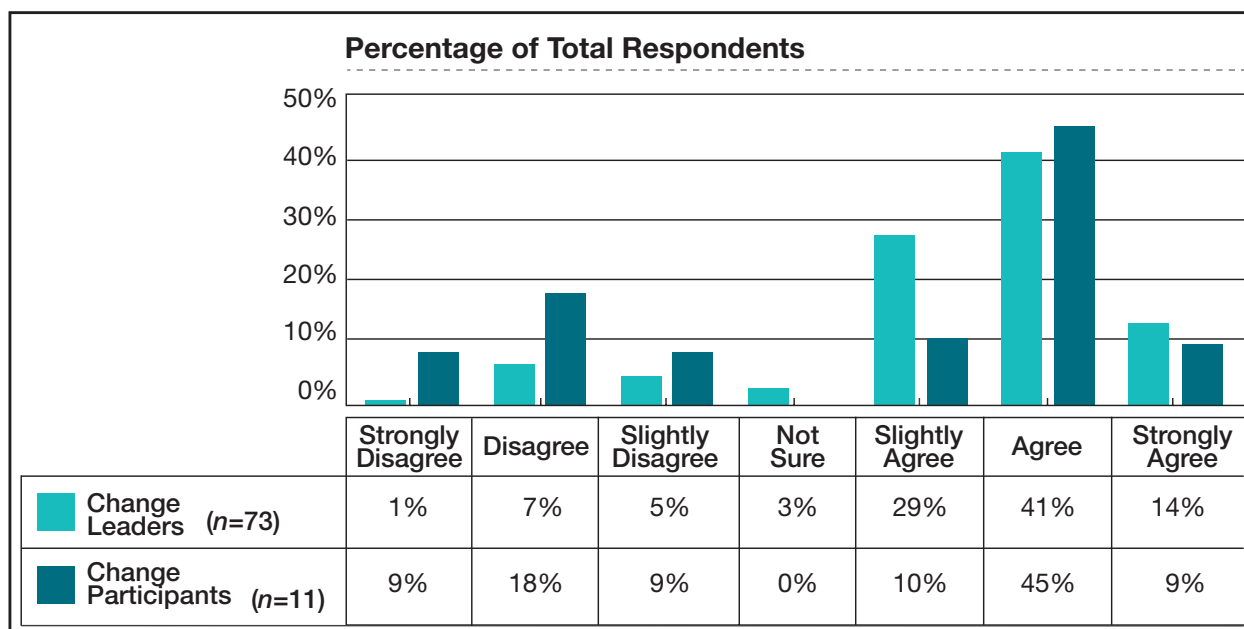


Figure 8. Frequency distribution for survey item: When the going gets tough here, people tend to stick together.

The results of this survey item are encouraging for multiple reasons (Figure 8). The apparent enthusiasm for working as a team is a boon for any organization. The Change Leaders and Change Recipients responding to the survey overwhelmingly agree that the organizations for which they work are willing to work as a team to accomplish goals, tasks, jobs, or other directives. Change Leaders who recognize the positive impact of a team atmosphere realize real change must come from the recipients, since they are the primary implementers (Renesch, 2007a; Turner, 2009).

Survey item: During past change initiatives, employees have generally stepped up and actively participated in helping to shape and implement these changes.

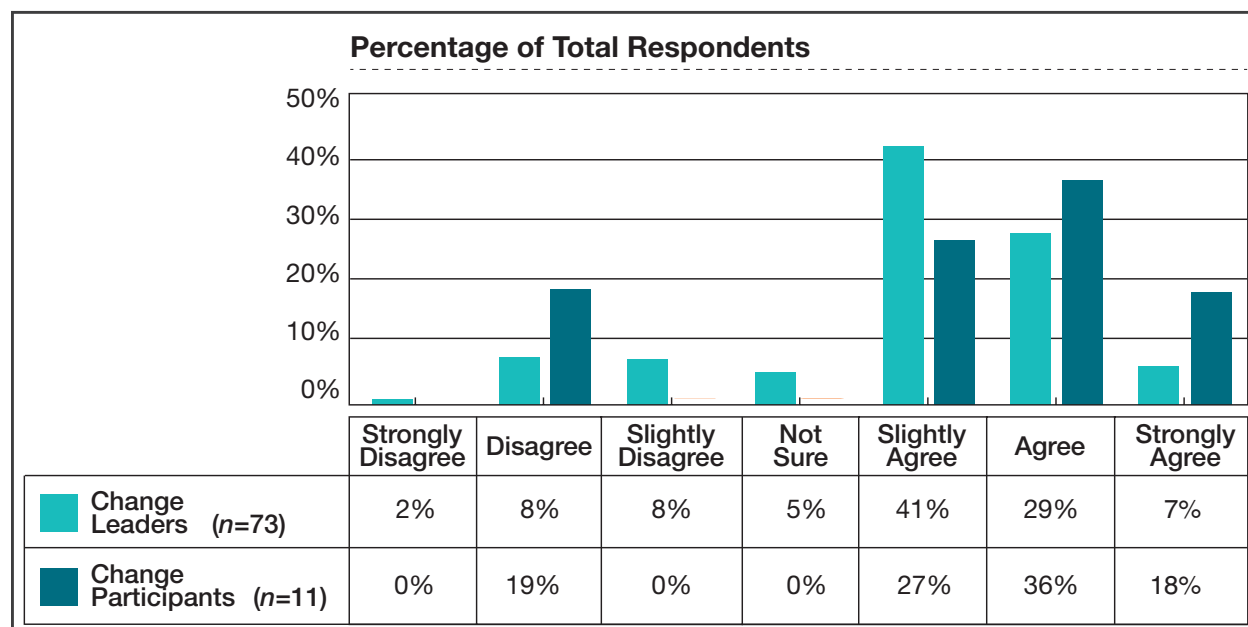


Figure 9. Frequency distribution for survey item: Employees have generally stepped up and actively participated in change.

According to the results displayed in Figure 9, employee participation and the tendency for Change Participants to rise to the occasion are aligned with the Change Leaders. However, results from related questions contradict this data as it relates to training (Figure 6) and communication (Figure 7). Employees are willing to respond eagerly and positively to a change, but if they are lacking the information or understanding necessary to perform a task or reach a goal there is an indication of disconnect. Each member of an organization is important to an organization and the change process (Jones, 2001). Providing clear communication by creating an environment of teamwork and collaboration can aid in the sustainability of a change initiative.

OCRA change environment component results. The change environment assessment of this survey includes issues of awareness and clarity of the change communications and previous experiences with the results of change (Russell, 2010). These issues are covered in the results of following three survey items.

Survey item: The proposed change and its effects on all organizational dimensions (e.g., structure, strategy, processes, workflow, systems, etc.) are clearly defined and understood by those leading change.

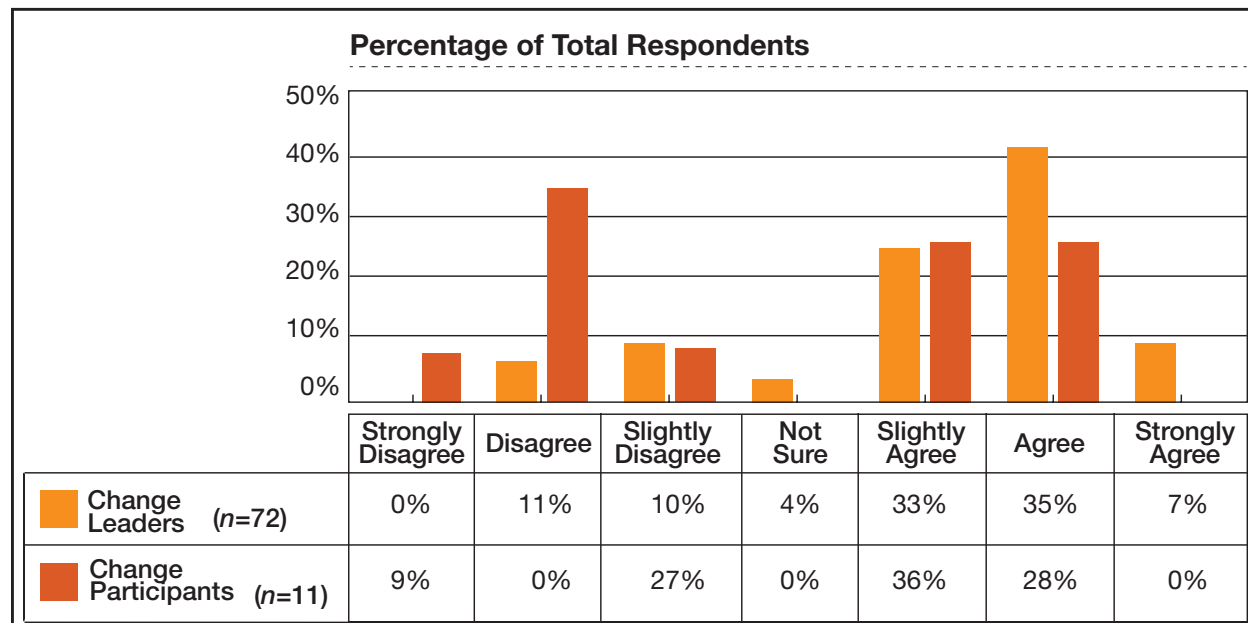


Figure 10. Frequency distribution for survey item: Clear definition and understanding by Change Leaders and participants.

The data shown in Figure 10 clearly shows an overwhelming majority of all survey respondents are on the agree side of the spectrum. However, the percentage of the respondents who disagree on some level may create challenges. Such challenges may be lessened when ensuring clarity and understanding are a priority (Bush & Folger, 2005; Friedman, 2008; Kotter, 1996; Pollitt, 2003; Tager, 2004).

Llopis (2014) believes successful change also requires a common language in order to guide execution, monitor progress, and alter as necessary.

Any alteration of a process or system can create frustration for change leaders and change participants, increasing the need for clear communication (Friedman, 2008; Kotter, 1996; Platts & Tan, 2004; Putnam & Mumby, 1993).

The value of teamwork, strategy and a culture where information is shared is invaluable to any change initiative (Llopis, 2014).

Survey item: The reason or the “why” of the coming change can easily be translated into tangible evidence that will get the attention of the employees.

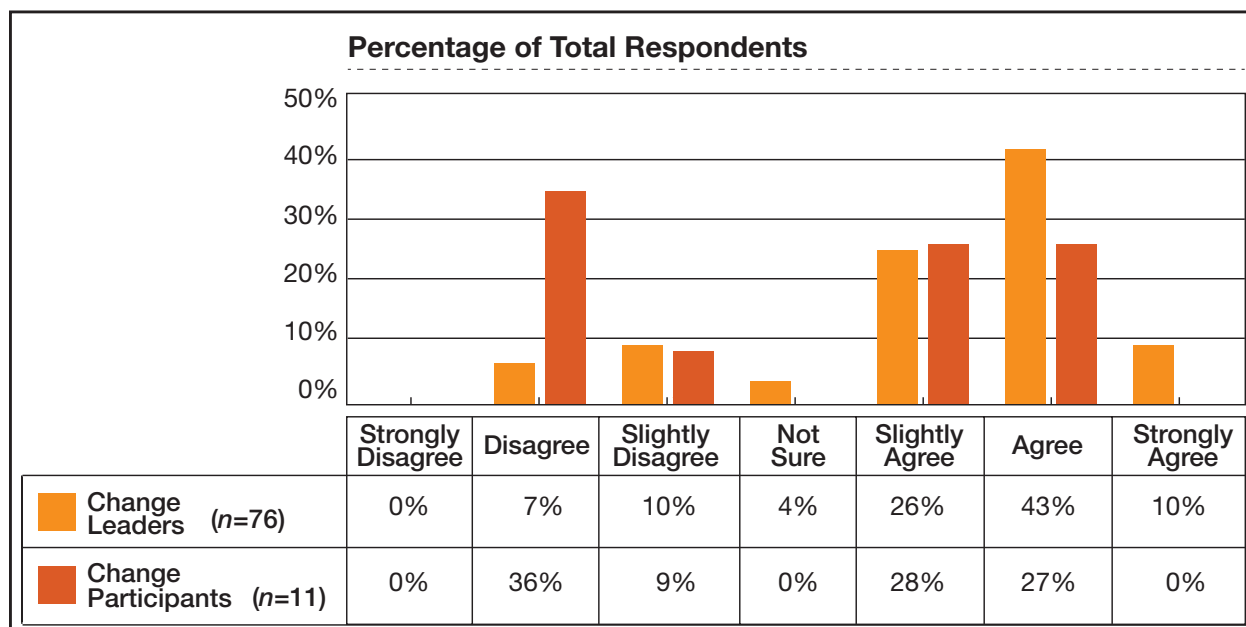


Figure 11. Frequency distribution for survey item: The reason or the “why” of the coming change can easily be translated.

The percentage of Change Participants who disagreed with this survey item indicates the need to provide not only direction, but also a purpose, when implementing change (Figure 11). The survey item can be similarly compared to data collected for survey items relating to communication (Figure 6) and a clear definition and understanding by Change Leaders and Change Participants (Figure 9). Change participants are just that, participants, leading to speculation that change may place their position in jeopardy. Employees who are confident about the future of their position are not as likely to experience fear or ambiguity (Haudan, 2008; Tuason, 2010). The importance of ensuring the Change Participants know “why” a change is needed indicates the necessity of effective communication, thereby leading to the desire to be an active and valuable participant in contributing to a successful change.

Survey item: The perceived benefits from the change are greater than the perceived losses or disadvantages.

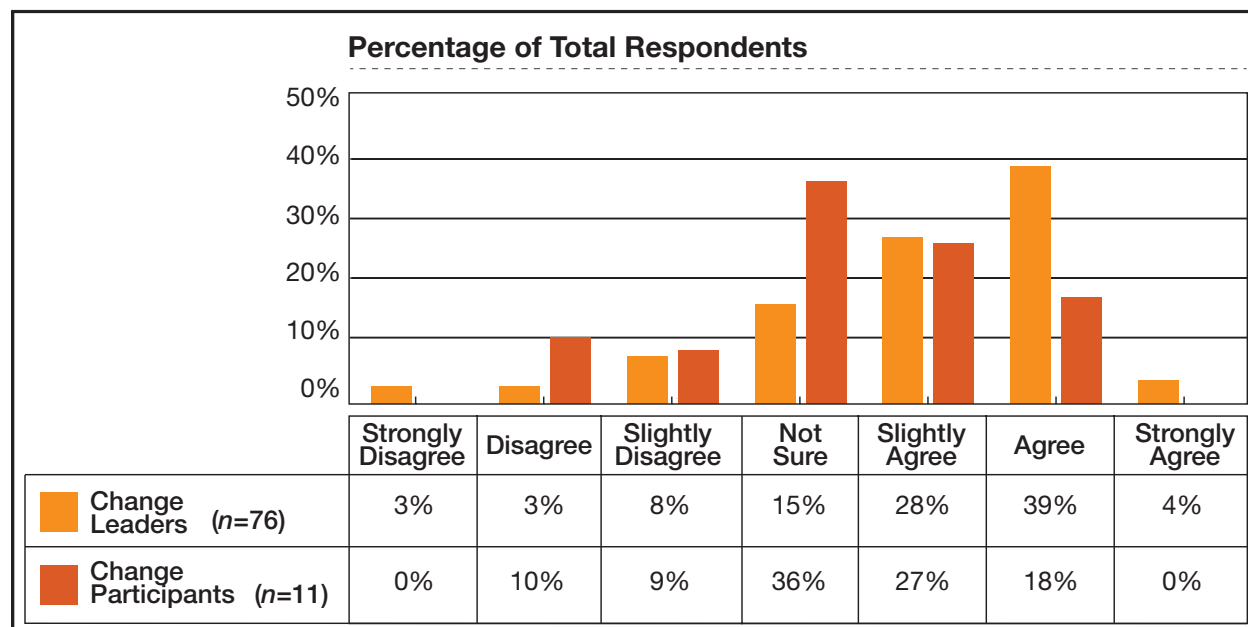


Figure 12. Frequency distribution for survey item: The perceived benefits are greater than the perceived losses.

Perceived benefits versus losses shown in Figure 12 is an area closely related with the results shown in Figure 9 and Figure 10. While all three questions do cover the Change Environment Component, the results of the survey item in Figure 11, show an interesting variance. The concern is with the percentage of Not Sure responses of the Change Leaders (15%) and Change Participants (36%). The previous two questions indicate a significant level of agreement for understanding, and the reason(s) for a change, but a fairly high percentage of uncertainty is an issue that could be a concern during implementation.

OCRA employee attitudes and behavior component. The final component assessed encompasses the urgency that employees feel about the need for change, the level of engagement of Change Participants in their jobs, and their overall receptivity to an organizational change (Russell, 2010). These issues are discussed in the following three survey items.

Survey item: Employees feel a sense of urgency-a felt need for change.

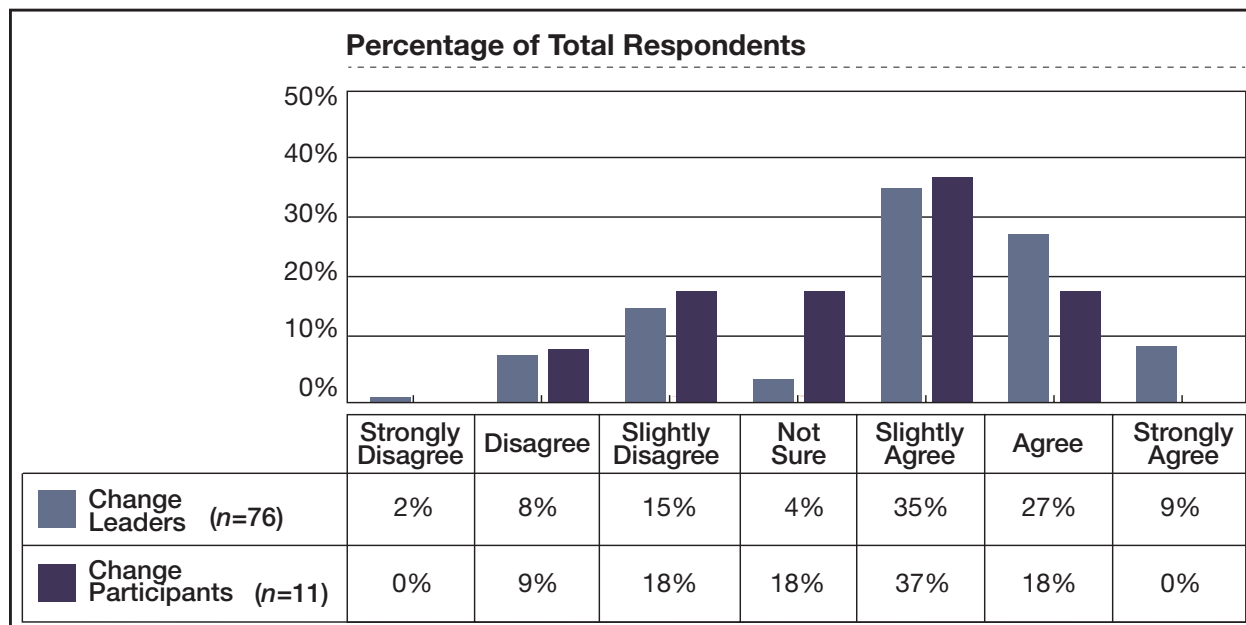


Figure 13. Frequency distribution for survey item: Employees feel a sense of urgency.

The results in Figure 13 indicate a widespread level of agreement for Change Leaders (71%) and Change Participants (55%) that change is a necessity. The remaining Change Participants (45%) falling into the Not Sure or Disagree side of the scale (45%) could be a cause for concern. Without a majority of agreement, urgency and need are issues that could potentially stall the implementation or initial progress of a change project.

Survey item: Employees have a high level of job engagement (job engagement reflects employee commitment to their jobs and the company).

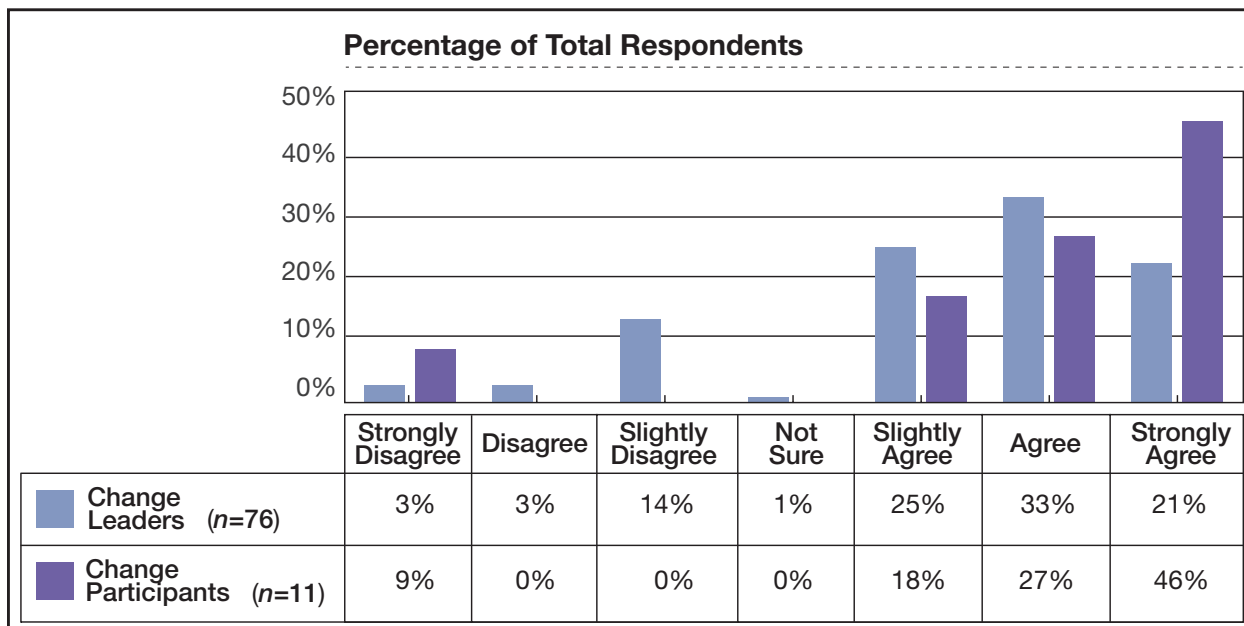


Figure 14. Frequency distribution for survey item: Employees have a high level of job engagement.

Job engagement is a crucial element in organizational change and can be the catalyst to overcome lack of agreement in other areas. The data gathered (Figure 14) shows the overwhelming level of agreement for Change Leaders (79%) and Change Participants (91%).

Survey item: Employees are generally receptive to change vs. feeling that “this too shall pass”.

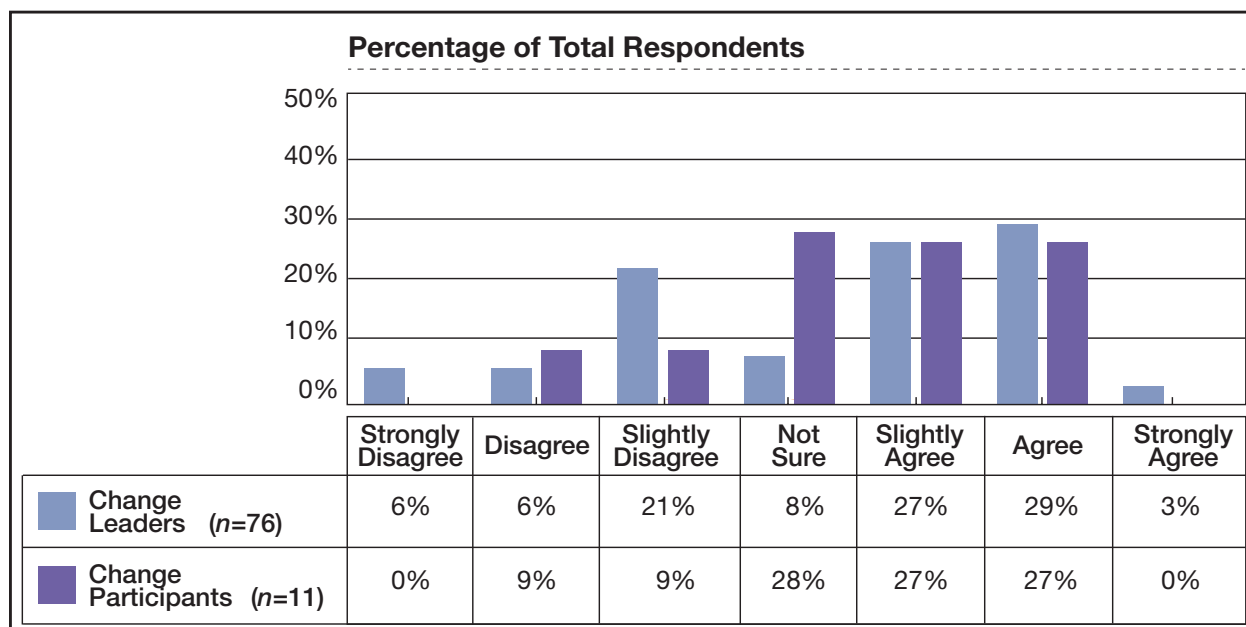


Figure 15. Frequency distribution for survey item: Employees are generally receptive to change.

The previous two survey items, the high level of Change Participant understanding of urgency (Figure 13), as well as their level of engagement, (Figure 14) indicates a congruence with Change Leaders. This information coupled with the desire to be receptive to a change (Figure 15) is good news for organizations, particularly when the level of communication and understanding is given the appropriate consideration.

Qualitative Data Analysis

A content analysis process performed on the responses to the open-ended questions as described by Creswell (2009). To ensure reliability of the coding process, two experienced colleagues reviewed the content analysis findings.

Examination of mind mapping responses. The following eight figures show the analyses that were performed on multiple survey items.

While the percentage of respondents from Figure 16 who use mind mapping on a regular basis; either monthly (17%), and daily or weekly (14%) is somewhat encouraging, an even greater percentage (41%) have never used it or are unsure of its benefits, capabilities, or value. The manner in which individuals use mind mapping is mostly personal. The following figures will show the different ways mind mapping is used in both a personal and professional context (Figure 17). The responses to the open-ended questions (Appendix A) were analyzed, coded, and categorized by the researcher and a peer to ensure content validity.

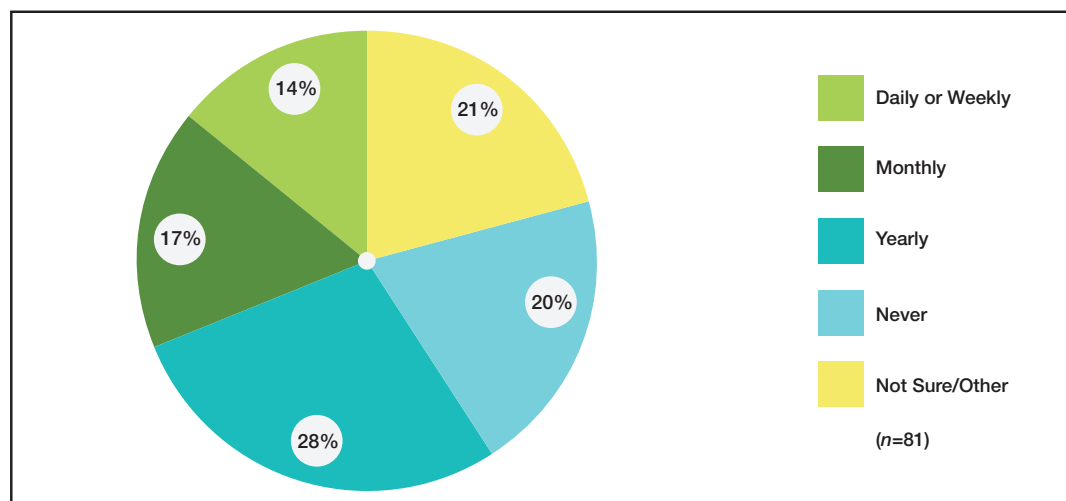


Figure 16. Mind map usage frequency.

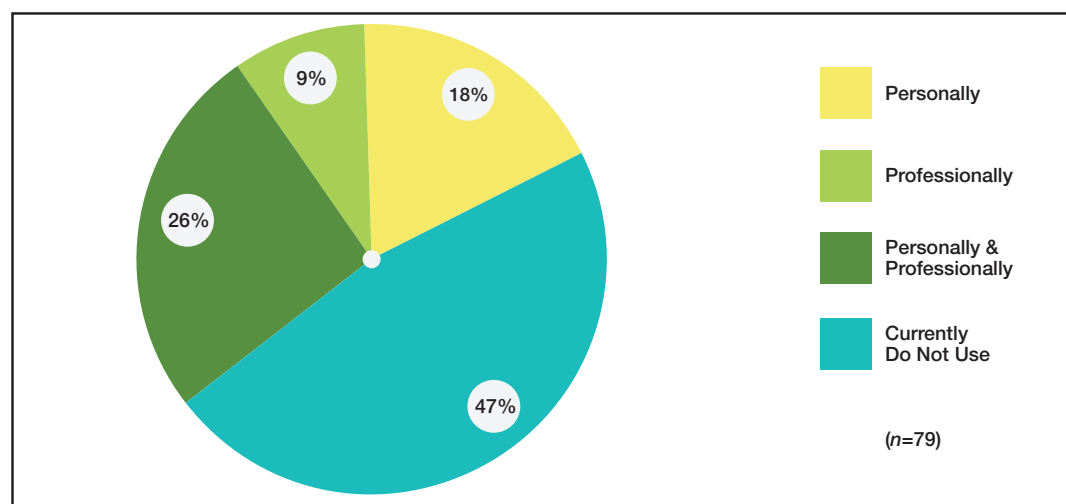


Figure 17. Percentage of professional and personal mind map usage.

Personal uses of mind mapping. Respondents who indicated previous experience with mind mapping, both Change Leaders and Change Participants, used it predominantly in a personal context. There were a wide variety of personal uses mentioned, some more common than others, but overall, respondents shared diverse, thought provoking, creative ways to implement mind mapping.

Multiple respondents used mind mapping to organize thoughts prior to action, or more specifically according to Respondent 67, “It helps me to gather thoughts and organize chaos”. Personal goal setting, self-evaluation, and organizing and prioritizing tasks were also a frequent

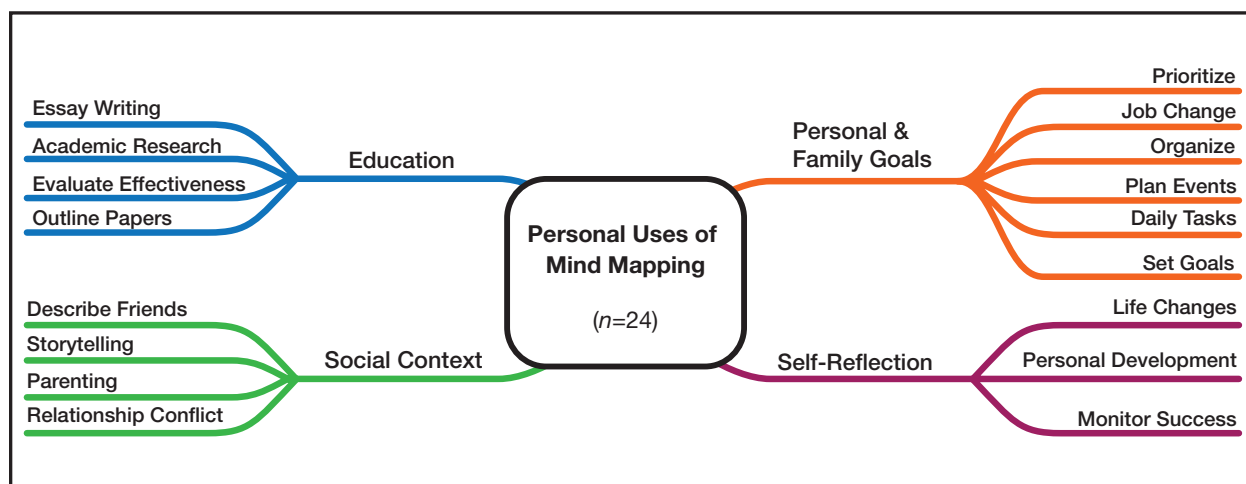


Figure 18. Personal uses of mind mapping by Change Leaders and Change Participants.

responses, with comments such as “to map out my day” (Respondent 67 and 83), “to explore implications of possible decisions” (Respondent 58), “to determine core values and personal strengths” (Respondent 43); and “to facilitate a life change” (Respondent 46).

Mind mapping can be used for virtually anything, and has been according to several respondents to this survey. Some of the more unique comments, based on survey results and previous research include: “I use for developing possible scenarios for addressing conflicts in relationships” (Respondent 51), “to handle some parenting issues” (Respondent 46), “story development” (Respondent 62), “describe friends” (Respondent 1), and “to help me with

clarity of thought and execution of action” (Respondent 29). Additional personal uses included wedding and family event planning, job change considerations, personal finance organization, and retirement planning. The use of mind mapping for various educational purposes was mentioned by eight respondents and included outlining essays, creating presentations, and organizing research.

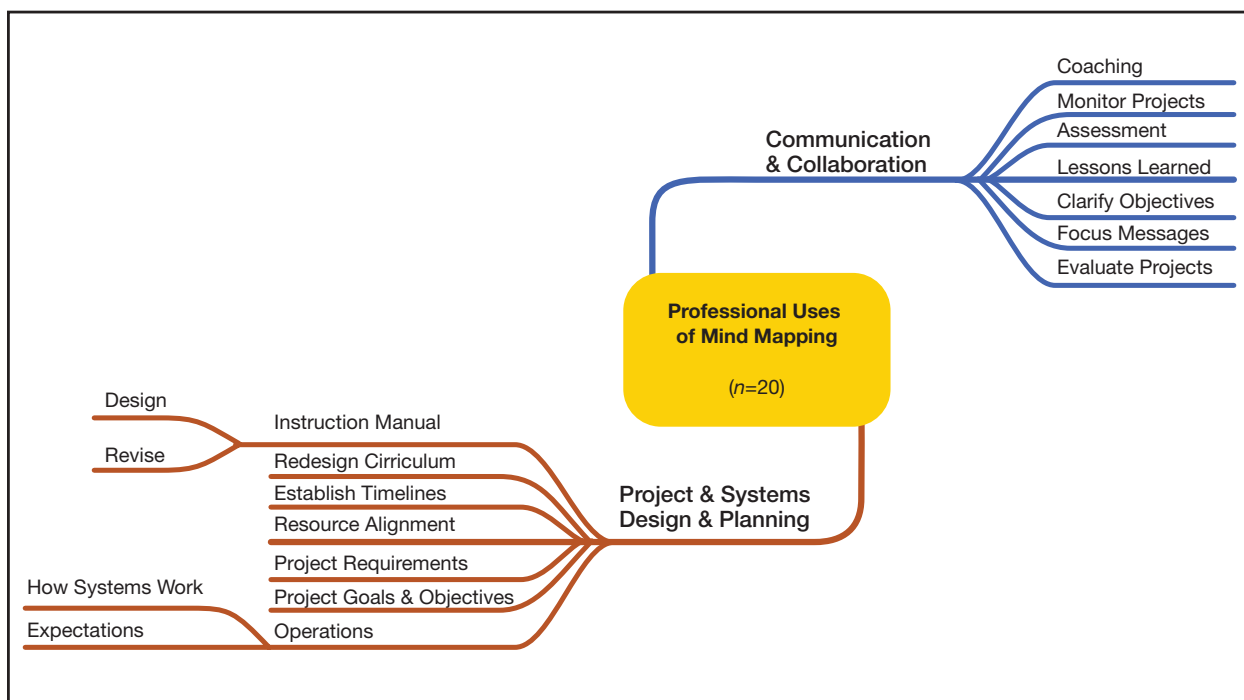


Figure 19. Professional uses of mind mapping.

Professional uses of mind mapping. Respondents used mind mapping professionally primarily for communication, and project and systems planning and design. Specific comments about communication included: “[I] collect data as a participant from larger group meetings and use it to reflect and communicate to others not present” (Respondent 65), and “I use it to organize my thoughts around a conceptual model with many elements, and as a communications vehicle” (Respondent 47). Project and systems planning and design comments included: “I use mind mapping in a digital context to outline major projects and new initiatives” (Respondent 67), and “I view my team mission as the key image, and as I prepare documentation or make maintenance decisions I make sure that they serve a purpose in completing that mission” (Respondent 83). “Changing procedures to become more efficient and effective is a major professional goal” (Respondent 76). Several respondents gave very specific comments how mind mapping is beneficial to them professionally. For example, Respondent 97 commented, “We live on white boards mapping process for change implementation. This graphic approach to ideas, tasks, phases, timing and fees has even included the client’s direct input. It helps those who are less visual grasp complex processes”. One respondent who self-identified as a certified mind mapping instructor, uses it to “facilitate leadership within organizations” (Respondent 84).

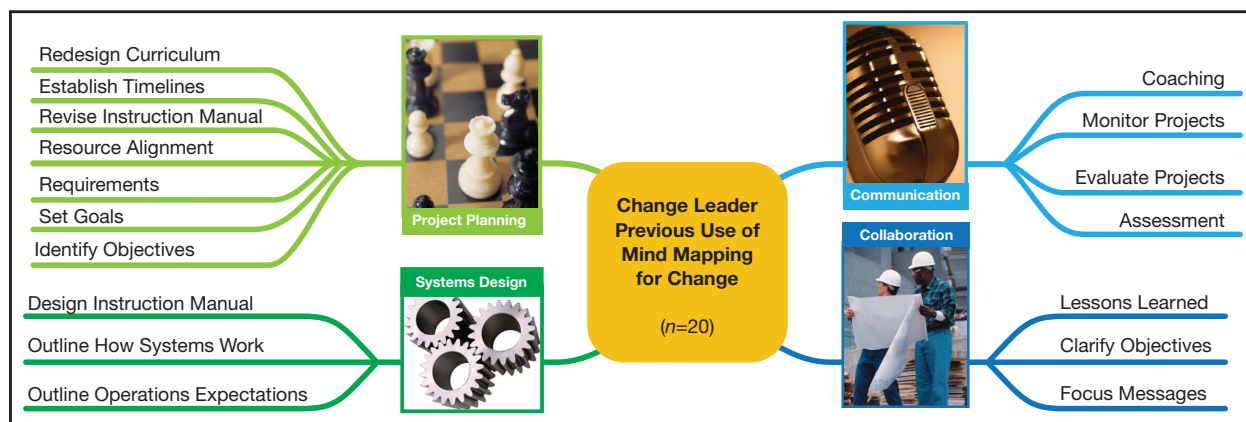


Figure 20. Leader previous use of mind mapping for change.

Several Change Leaders who have found personal uses for mind mapping, have also implemented it professionally for change management (Figure 20). According to Respondent 29, “At the onset of a [change] project, I annotate the actions and decision points for going forward”, and Respondent 23 states, [I use it] “to understand the components and links of the issue”. Perhaps the most comprehensive comment was from Respondent 84, “With teams I use it mostly for collaborative sessions to encourage plural thinking, ownership and responsibility. I also use it with senior executives to help clarity of thought. I use it for coaching through change. Basically there is no aspect of change in an organization for which I would not use mind mapping”.

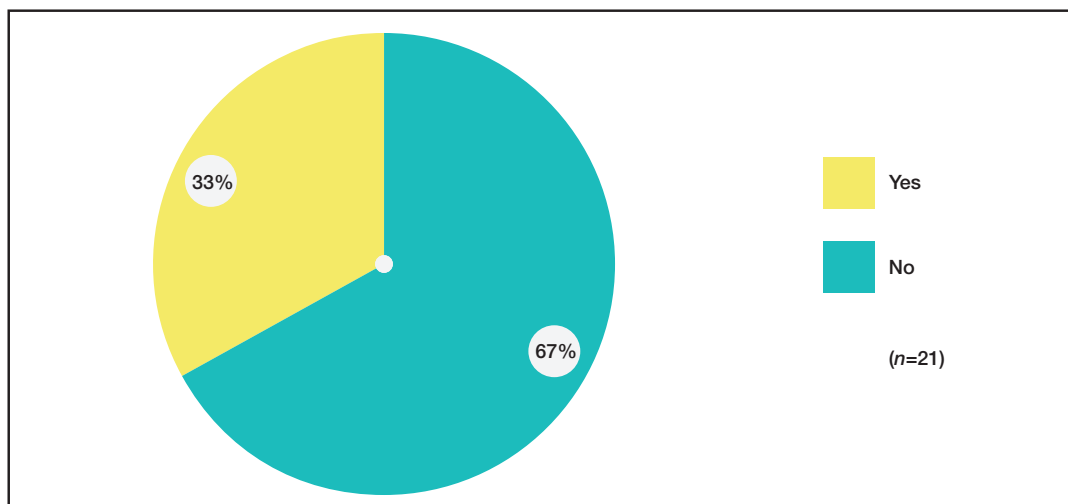


Figure 21. Previous use of mind mapping for change.

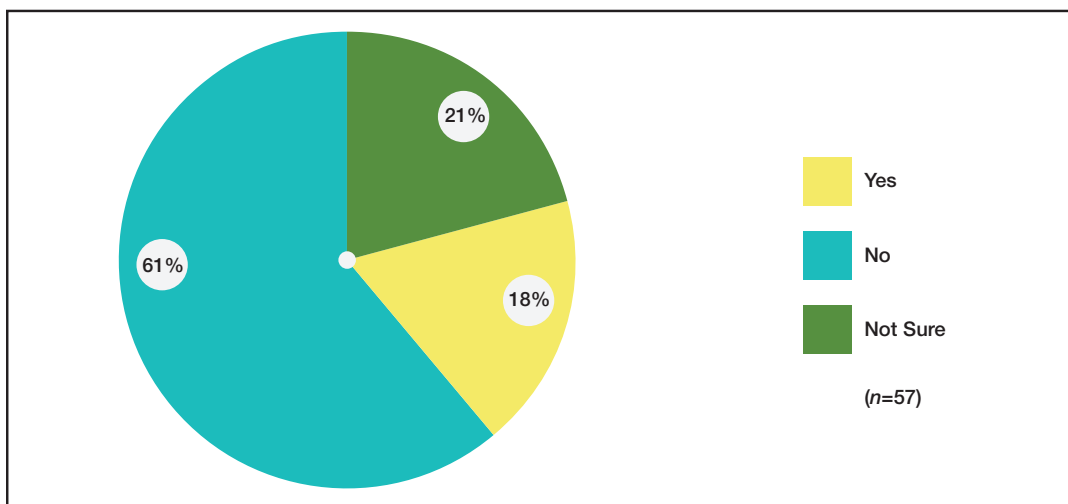


Figure 22. Consideration to use mind mapping for change.

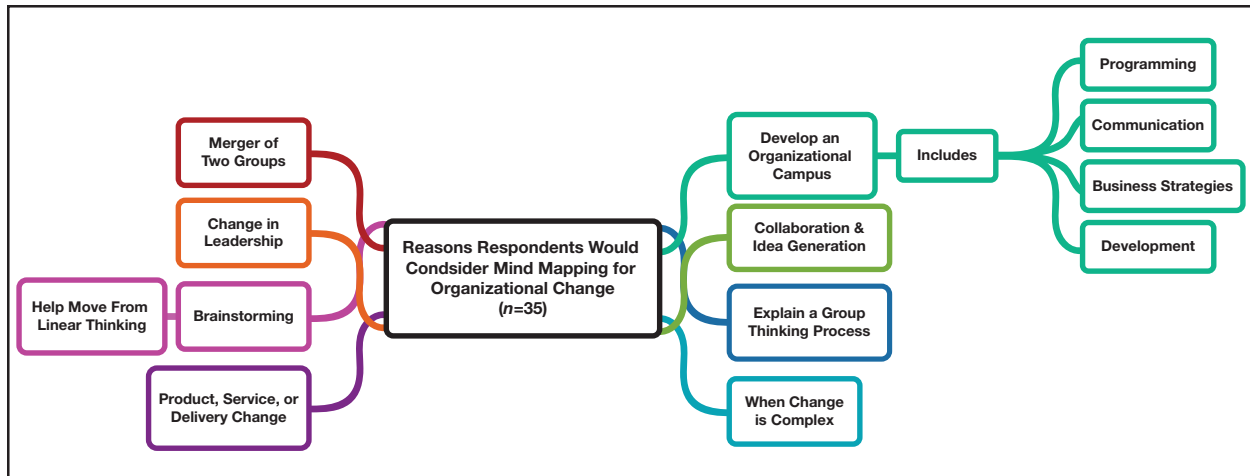


Figure 23. Reasons or situations mind mapping would be considered for change.

Reasons or situations mind mapping would be considered as a change tool.

Perhaps based on previous use of mind mapping in a personal context (Figure 21), respondents commented on ways they would consider the use of mind mapping in conjunction with organizational change (Figure 22). In addition to the responses shown in Figure 23, Respondent 2 explained, “If I were structuring curriculum, I could mind map goals. If I were writing a paper, I could mind map the areas I want to cover. In my current organization, I could map out my responsibilities instead of writing a list”. Respondent 68 commented “We could use mind mapping to assign individuals areas of improvement”, and Respondent 86 considered mind mapping as a possibility “When the changes being considered are complex and a visual is needed to help provide clarity”.

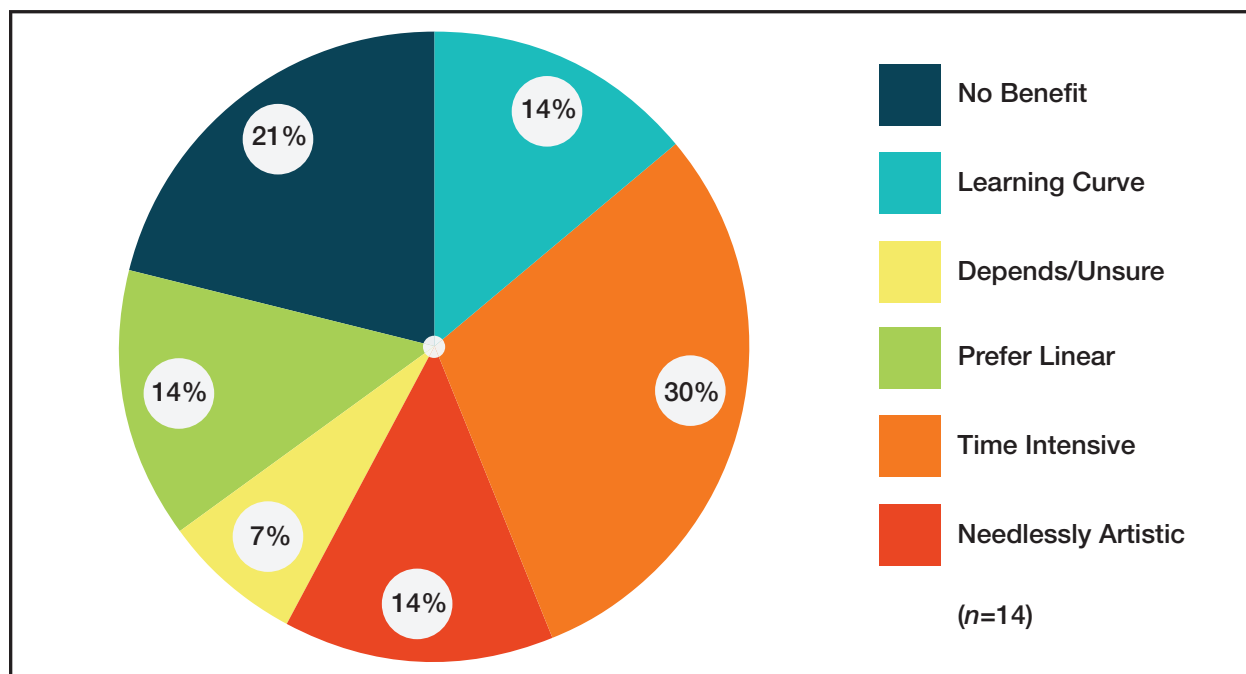


Figure 24. Reasons mind mapping would not be considered for change.

Reasons mind mapping would not be considered as a change tool. There are no magic bullets to successful change. Change Leaders responded with several reasons why they would not consider mind mapping for change. A few respondents commented on the amount of time they believe mind mapping would involve, such as to learn and disseminate information, essentially deeming it to have little or no benefit. Respondent 2 comments: “Mind mapping is not for everyone and in some cases, requires instruction. I also think mind mapping requires a certain level of creative energy or artistic flair that a lot of individuals lack”. Similarly, Respondent 98 comments, [I believe there would be] “resistance by employees, cost to company owners, time to train and implement results.”

Chapter 5: Conclusions, Implications, and Recommendations

Introduction

Change, in any form, any situation, or for a multitude of reasons, positive and/or negative is something we all face. The success or failure of an organizational change ultimately depends on the behaviors and attitudes of individuals. Impeding on those behaviors and attitudes are the seemingly unlimited barriers within an organization that tend to thwart success. The problem this study addressed is the failure rate of organizational change, the examination of the change readiness for Change Leaders and Change Participants, and what can be done to improve the success rate and the consideration to use mind mapping in the change process.

This research addresses those barriers by assessing the attitudes of people responsible for organizational change, as well as the participants of change, and their inclination to use mind mapping in conjunction with or in addition to a proven change model or one currently being used. If the use of a tool has the potential to increase the success rate of change, improve communication, and better manage conflict it should become an integral part of planning, formulating, and implementing organizational change. The intent of this exploratory research is to add to the body of knowledge concerning the change readiness of leaders and participants, and the attitude or interest to incorporate mind mapping into change initiatives.

Conceptual Support

Organizational change: Essential, perpetual, difficult, and high failure rate. Faced with the reality that 50% to 70% of change projects fail, it is overwhelming to realize that organizational change is necessary and inevitable (Kotter, 1996; Kouzes & Posner, 1987; Mento, et al., 2002; Mento, et al., 1999; Miller, 2002). Such a high instance of defeat sets the stage for the likelihood of organizational extinction, while the need for change can signal demise for some organizations (Kotter & Schlesinger, 1979). Individuals struggle when handling multiple and continuous change (Jick, 1990), as well as copious unknowns, creating difficulties for leaders (Wharton & Roi, 2002). Leaders should be fully involved in the change process, in order for

them to ease the difficulty and disruptive nature experienced by employees (Holden, 2007). To increase the chances of successful change, it is imperative for leaders to personally adjust to the change, and have a passionate belief in what makes change successful (Miller, 2002). The failure of change projects can also be blamed on the inattentiveness of leaders to understand employee perceptions of change, as well as some of the reasons for differences in behavior that ultimately impact the process and result of change (Heynoski, 2011). Unfortunately, it is not uncommon for leaders to refuse to alter their behavior or actions, contradicting the requirements placed on the followers (Kotter, 1996), justifying their behavior behind the guise of experience (Miller, 2002). Leaders must personally change their behavior (Miller, 2002) in order to successfully involve employees throughout the organization (Schaffer & Thomson, 1992; Wagner, 2006).

Change necessities: Training, knowledge, understanding, and clarity. The problem organizations face is that even the most engaged employees will not be engaged in implementing strategy when they don't know what they are expected to accomplish (Haudan, 2007). Training is one of the keys to success in any organization and when considering a change, it becomes even more crucial (Hogan, 1994; Kotter, 1996; McGinnis, 2006; Williams, 1998). If employees are unsure how to perform their jobs, accomplishing organizational goals through change is met with resistance and viewed as unsupportive (Haudan, 2007; Kotter, 1996; Miller, 2002). Clarifying goals and defining the reasons for change are in the best interest of the leaders, and followers of an organization (Roam, 2008; Sibbet, 2002). Followers who do not know can conjure up fear and ambiguity (Haudan, 2008; Tuason, 2010), in addition to uncertainty and loss of control (Bordia et al., 2004; Di Fonzo & Bordia, 1998; Haudan, 2008; Tuason, 2010). Leaders who properly manage change by providing participants with accurate, and timely information communicated clearly, tend to increase receptivity, optimism, and facilitating behaviors (Gonzales, 2006).

Communication and organizational change. A fundamental element present in every change project is communication; therefore, by exploring the use of multiple channels and/

or methods of communication it may be possible to increase the instance of successful change (Buzan, 1989, 1996; Crane, 1993; Margulies, 2002; McGinn & Crowley, 2010; Pollitt, 2003; Roam, 2008). If the message is not shared using the appropriate method(s), communication does not truly take place (Buzan, 1989,1996; Crane, 1993; Freidman, 2008, Gross, 1993; Margulies, 2002; Roam, 2008; Rosenbaum, 2004; Sibbet, 2002). The selection of communication method can be every bit as impactful as the actual message (Buzan, 1989, 1996; Crane, 1993; Freidman, 2008; Margulies, 2002; Pollitt, 2003; Roam, 2008; Tager, 2004).

Given that defining organizational goals and effectively communicating them so they are understood is such an instrumental step before change process (Davis, 2010). One of the alternate channels or methods in which to convey the message is through the use of visualization (Buzan, 1995; Sibbet, 2008). Organizing and utilizing multiple methods of communication enables change recipients of all learning styles to hear, see, gather, comprehend, and embrace the information (Kalies, 2006).

Mind mapping: Visual communication. Visual tools are much more than a way to store ideas that have already been formulated and developed; they also offer a unique and effective manner in which to construct content knowledge (Hartley, 1996). According to Roam (2008) the visual and verbal presentation of information improves the possibility of clear and accurate communication (Roam, 2008). Roam (2008) also states, “A visual representation enables us to see things differently, uncover ideas otherwise unnoticed, and present them to others in a way they genuinely understand” (p. 4). Another aspect of visual thinking important to this study is the research and literature that examines how effective visual thinking techniques are at improving achievement, retention, motivation and attitude; likely making it applicable to the challenges of organizational change (Bordia et al., 2004). Mind mapping makes knowledge visible by displaying information in a more accessible manner, and can help to simplify complex situations (Buzan, 1996; Eppler & Burkhard, 2007; Finch-Maecklebergh, 2006; Mento et al., 1999; Rosenbaum, 2004; Vail, 1999). Hence the importance of understanding, and the

communication necessary for a change initiative, such attributes can be invaluable (Buzan, 1996; Eppler & Burkhard, 2007; Finch-Maecklebergh, 2006; Mento et al., 1999; Rosenbaum, 2004; Vail, 1999).

Methods

This exploratory research used the OCRA Survey, an established tool used to assess change readiness levels (Russell, 2010). In addition, open-ended questions were asked of individuals who self-identified as Change Leaders and Change Participants regarding current mind mapping usage or experience, and input on the use of mind mapping for organizational change. Frequency distributions were calculated from many of the OCRA survey questions, considering the responses of Change Leaders and Change Participants as two separate groups and as one when appropriate. The open-ended survey items were analyzed through content analysis.

Findings

Change recipient responses and behavior. According to the results displayed in Figure 9, employee participation and the tendency for Change Participants to rise to the occasion are aligned with Change Leaders. Change Leaders and Change Participants responding to the readiness survey strongly agreed that the organizations for which they work are willing to work as a team to accomplish goals, tasks, jobs, or other directives.

The data shown in Figure 10 clearly shows an overwhelming majority of all survey respondents agree there is a clear definition and understanding of how the proposed change affects all dimensions of the organization. However, the percentage of the respondents who disagreed on some level may create multiple challenges for Change Leaders. Uncertainty and successful organizational change are not compatible, and create multiple negative consequences including increased stress (Pollard, 2001; Schweiger & DeNisi, 1991), turnover (Greenhalgh & Sutton, 1991; Johnson et al., 1996), and decreased job satisfaction (Ashford et al., 1989; Nelson et al., 1995), a reduction in organizational commitment (Ashford et al., 1989; Hui & Lee,

2000), and trust (Schweiger & DeNisi, 1991). Recipients deserve to be properly informed of the reasons for a change, including the future organizational direction, plans for sustainability, and the state of the industry (Bastien, 1987; Bordia et al., 2004; Richardson & Denton, 1996). Such challenges may be lessened when ensuring clarity and understanding are a priority (Bush & Folger, 2005; Friedman, 2008; Kotter, 1996; Pollitt, 2003; Tager, 2004). Respondents offered several suggestions to enhance training, knowledge, understanding, and clarity: “We could use mind mapping to assign individuals areas of improvement”, “A change of leadership within the organization, a merge of two groups within the organization, or a significant change of product or service or delivery of those services to the customers” (Respondent 72) would be a positive use of mind mapping.

The data indicates the Change Leaders agree the reason for change can be translated into tangible evidence that will get the attention of the employees. However, the percentage of Change Participants who disagree with this question indicates there is still a need for Change Leaders to improve their focus on providing not only direction, but also a purpose, when implementing change. As a leader facing change, the stages of denial, deference, acceptance, and justification are a necessary precursor to fully believing in, and advocating a change (Kalies, 2006).

Change Leader and Change Participant eagerness. Although readiness for change and the resistance to change are very different factors for change leaders and change participants (Riches, 2010b), this research found that both Change Leaders and Change Participants have a high level of engagement. The OCRA results revealed that close to 50% of all Change Leaders and Change Participants scored in the moderate and high level of change readiness. A moderate change readiness score indicates that a change project has a greater chance of success through mindful planning and implementation (Russell, 2010). A high level of readiness signifies there is a greater opportunity for successful change if leaders and employees are aware and amenable to the challenges ahead (Russell, 2010).

Two survey items (Figure 8 and Figure 9) relate to teamwork and the willingness to actively participate in change. The results show well over 50% of the Change Leaders and Change Participants scored on the agree side of the scale for both survey items. These results indicate the degree to which Change Leaders believe the Change Participants will stick together and work as a team during difficult times, and to actively participate in change. Leaders should view these results as encouraging and act accordingly. Employees who are involved, and have a high level of commitment to their jobs and the company (Russell, 2010) tend to take ownership of an upcoming project (Fenton, 2007). According to Haudan (2007) a low level of engagement is an issue that has the potential to impede or prevent implementation of a project.

Embracing the enthusiasm and willingness of Change Participants can help to create or positively change the culture of the organization, and such actions may improve the success rate of organizational change. Rashid et al., (2004) conclude the differing feelings toward organizational change are closely related to the type of culture present in the organization, impacting the emotional, intellectual, and behavioral tendency of organizational change attitudes. Cultural considerations include the importance of clarity, understanding, reasons, and ultimately the perceived benefits of change for both change leaders and change participants (Russell, 2010). Results show that differing organizational cultures have different levels of acceptance of attitudes, leading to the conclusion that certain types of organizational culture can facilitate the acceptability of change (Rashid et al., 2004). According to Russell (2010) employees who are involved, and have a high level of commitment to their jobs and the company tend to take ownership of an upcoming project.

Mind mapping for organizational change. Mind mapping, officially defined by Buzan in 1974, has a bit of a cult following. According to this research, those who currently use mind mapping personally and/or professionally, do so with vigor and strong sense of commitment. They are passionate about mind mapping and fully believe in its power and the opportunity it can and has created for organizational change. Collaboration, clarity, a sense of ownership and

responsibility and coaching were mentioned by multiple respondents as uses and benefits of mind mapping. Another respondent's viewpoint: "Change projects can be daunting and scary, but utilizing a mind map just might make a potentially frightening change just a bit more pleasurable and acceptable". In some organizations, mind mapping has replaced more conventional methods of recording communication (Margulies, 2002), but has limited use in the organizational change process. Examples of respondent comments questioning the use of mind mapping with change include: "Mind mapping is not for everyone and in some cases, requires instruction. I also think mind mapping requires a certain level of creative energy or artistic flair that a lot of individuals lack".

Based on the results of this research, most organizational change leaders and change participants are aware of the necessity of organizational change and the subsequent challenges and dread that accompany it, mind mapping is not considered often, if at all. It is important to remember that planned communication is crucial, however, regardless of the level and accuracy or timeliness, there will always be criticism from recipients (Callan et al., 2004). One survey respondent explains: "When the changes being considered are complex and a visual is needed to help provide clarity" mind mapping should be considered as a useful tool. According the results displayed in Figure 18, mind mapping is frequently used for personal actions such as essay, writing, relationship conflict, prioritization, event planning, goal setting, and personal development to name a few. Professional uses (Figure 19) include communication and collaboration, establishing expectations, project requirements, monitoring and evaluation, and resource alignment. Responses to the open-ended items about mind mapping include understanding the components and links of an issue and to annotate actions and future decision points.

Conclusions

Conclusion 1. People know change is inevitable. The participants in this study indicated that people don't look forward to an organizational change, but realize it must happen

and are, for the most part, willing to take responsibility and effectively contribute to its success.

Implications. Failing to give Change Participants the responsibility that, according to the results of this research, they are eager to embrace and help meet organizational challenges. Leaders who fail to recognize, address, or give credence to the impact on change recipients, and their value, are doing the organization a disservice (Turner, 2009). While it is true that leaders are faced with multiple challenges before, during and after an organizational change; all too often the recipients do not receive the attention and focus they need and deserve (Karp, 2004). Research has shown that worker's with a positive approach when considering the risks associated with change and the freedom to solve job associated problems, are more confident in their job performance abilities, and report an increased readiness for change (Cunningham et al., 2002).

Recommendations. It is important to take advantage of Change Participants' knowledge and enthusiasm, adding not only to successful change, but employee well-being. Encouraging and believing in employees is an action that is all too often absent, not heartfelt, or timely.

If an organization is going to spend the worthwhile time, money, and resources to recognize your high performing employees, do it right through proper recognition and specific praise (Efron, 2013). Withholding or giving recognition sparingly will not achieve desired results or highly engage the best employees (Efron, 2103). Establish a system in which employees truly feel appreciated for their work. Rewarding and recognizing character is a method that has been successful in organizations. As an example, Character First conducts character-based leadership development programs to organizational leaders to define behavioral goals, reinforce positive behaviors, and build a culture that values good character (Character First, 2014). Organizations can benefit from focusing on character and competency, enabling leaders to produce high levels of consistency throughout the organization (Character First, 2014).

According to Mellor (2014), "It takes character and integrity to overcome the traditional problems businesses face and create a positive, engaging, and productive workplace culture" (para. 1).

Conclusion 2: Attitudes, behaviors, and feelings toward change vary based on the role one plays. One of the challenges this study uncovered was the difference between Change Leaders relinquishing control or responsibility, and the willingness of the Change Participants to be involved.

Implications. The change leader plays a crucial role in affecting change, based on their behavior, outlook, attitude, commitment, and willingness to engage and actively involve Change Participants in the process. In this study there is a clear distinction between attitudes and the role one plays in the process based research by Renesch (2007b) and Turner (2009) who found that leaders who recognize the positive impact of a team atmosphere realize real change must come from the recipients, since they are the primary implementers. Employees are willing to respond eagerly and positively to a change, but if they are lacking the information or understanding necessary to perform a task or reach a goal there is a disconnect which will impede the change process or results. It is important that leaders of change develop the competencies and those of their employees that will allow them to manage organizational change and its accompanying uncertainty and complexities (Callan et al., 2004).

Recommendations. Change Leaders should respect the role of the employee to the extent that they are more or less ready for change, and involve them more in the process. Altering steps in the planning and implementation process by soliciting input from change recipients can provide valuable information. Perhaps more importantly, and valuable long term, is the inspiration, and the acknowledgment of employee value, ultimately increasing the possibility of successful and lasting change. People who have an investment in a project or process tend to be more engaged and assume responsibility than if simply given a directive. Job engagement is a crucial element in organizational change and can be the catalyst to overcome lack of agreement in other areas.

Conclusion 3. Communication is essential for any change process regardless of

what specific tool is used. The root of these challenges, according to the Change Participants is predominantly some form of communication.

Implications. Every organization is unique regardless of the industry in which they do business, however, there are two elements always present in each one; people and the need for effective communication (Buzan, 1989, 1996; Buzan & Buzan, 1996; Campbell, 2006; Cloke & Goldsmith, 2000; Eppler, 2007; Margulies, 2002; Palmer, 2008; Schneider & Bowen, 1995; Sibbet, 2008). There is no escaping either one. Unfortunately, unfettered communication or the lack of productive communication creates a platform for conflict, poisoning the change environment. People are the reason communication is necessary, as well as the reason why it has a tendency to go awry, and in order to plan, design, and implement change the two must be in harmony. Visual communication utilized more frequently and diversely, can enhance conventional methods of communication. The traditional methods by which all communications are made within an organization are not always the best course of action when dealing with change (Di Fonzo & Bordia, 1998). Hartley (1996) has defined visual tools as “symbols graphically linked by mental associations to create a pattern of information and a form of knowledge about an idea” (p. 24). Visual tools, such as visual metaphors (Ausubel, 1960), input output diagrams (Craig, 2000), visual recording (Sibbet, 2010), and mind mapping (Buzan, 1996; Sibbet, 2010), aid the user in organizing or following instructions, completing a task, or in seeing relationships (Craig, 2000). Visual representations can communicate compelling and lasting ancillary implications necessary for the transfer, understanding, and receipt of information. The significance of this definition is that visual tools are much more than a way to store ideas that have already been formulated and developed and they also offer a unique and effective manner in which to construct content knowledge (Hartley, 1996).

Organizing and utilizing multiple methods of communication enables change recipients of all learning styles to hear, see, gather, comprehend, and embrace the information (Kalies, 2006). High on the list of reasons for uncertainty are the lack of information (Berger &

Calabrese, 1975), or vague and inconsistent information (Putnam & Sorenson, 1982). Such visual tools aid the user in organizing or following instructions, completing a task, or in seeing relationships (Craig, 2000).

Recommendations. Visual representations can communicate compelling and lasting ancillary implications necessary for the transfer, understanding, and receipt of information. Linear and non-linear individuals can benefit from visual communication in any form, however, people often think it has to be one way or another. The use of both text and visual information can enhance any message, however it is imperative to select the correct one for the situation.

Conclusion 4. Using mind mapping with change is underutilized. There appears to be a disconnect between people who regularly use mind mapping personally, and those that seem to realize it is can also be an effective professional tool.

Implications. Communicating using mind mapping is more frequently used as a personal tool than a professional one. Mind mapping is underutilized because it is not traditionally used for change. Reasons include lack of knowledge or awareness about the tool and the many ways it can be used. Change Leaders and Change Participants all agreed that change is challenging, and many who were familiar with mind mapping indicated they would be willing to consider or alter how they handle certain aspects of change through its use.

Recommendations. The creation and/or establishment of a change management tool specifically designed for certain aspects of organizational change should be available or considered for change. Actively incorporating training for mind mapping has the possibility of building on a high receptivity level for change. Change is inevitable and has been implemented thousands of ways, or possibly the same way for years in certain organizations. Incorporating mind mapping into the change process is a change worthy of consideration, particularly if repeatedly using the same has resulted positive and lasting change.

It is a misnomer that only non-linear people will understand the predominantly right brain aspect of mind mapping. Individuals have a tendency to be left-brained (linear) or right-

brained (creative, non-linear thinkers), however, everyone has the capacity to utilize both sides of their brain (Buzan, 1989; Buzan & Buzan, 1996; Higgins, 1995b). Currently, communications regarding change are commonly set forth in emails, memos, PowerPoints, instruction manuals, during a staff meeting, or a few sessions of initial training, are all methods that are largely linear. When planning organizational change, it is recommended to consider the use of both linear and non-linear communication. Right-brain thinking is logical when creating a mind map because the format allows the flow of information to jump from topic to topic as it arises (Buzan, 2002, 2005; Higgins, 1995b) and the configurations of a problem or situation can be seen in a way that is improbable with linear outlines (Margulies, 2002). One of the benefits of mind mapping according to Mandhyan (2009a) is that visually stimulating, colorful and multi-dimensional mind maps are easier for the brain to accept and retain than traditional linear notes.

Study Validity and Limitations

The OCRA is a survey instrument proven to be reliable and valid based on research conducted by the developer (Russell, 2010). The Mind Mapping and Change Questionnaire was designed based upon the literature about mind mapping and organizational change, providing initial face validity. The three distinct parts were designed into a single survey and submitted to two colleagues with subject matter expertise to validate the content. The responses to the open-ended survey questions about mind mapping were analyzed separately by group, and were reviewed using intercoder agreement (Creswell, 2009), by submitting the responses to an experienced colleague to ensure content analysis reliability. Peer briefing (Creswell, 2009) was used as the validity strategy by the researcher and submitted to a colleague for consideration to ensure a reliable interpretation process. Conclusions were determined following a triangulation process considering both the quantitative and qualitative data collected.

The study is limited due to the nature of subject self-selection and non-probability sampling methods. Limiting the invitation to the researcher's professional LinkedIn network and on Facebook pages indicating an interest in mind mapping and/or organizational change may not

have provided a full-range of individuals who are involved in mind mapping or organizational change activities.

Closing Comments

Mind mapping and organizational change; will this combination solve all the angst surrounding organizational change? Probably not, however, looking at the change environment more closely by assessing readiness of Change Leaders and Change Participants, and seriously considering the value of mind mapping in conjunction with change projects will surely be productive. Remembering the extreme value of selecting the appropriate communication method(s), considering the recipient(s) of the information, the value of successful organizational change, and its challenges is a tall order, but with commitment and personal change, progress is inevitable.

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APPENDIX A

Virtual Survey

Demographic Questions

Virtual Survey will include items to gather demographic information and Mind-Mapping understanding and use.

Demographic Information (categorical response items)

- Years of experience as a leader of change in your organization
- Number of employees have in current organization
- Age group
- Primary industry

Open-ended Questions about Mind Mapping

- What is your experience as a creator or user of mind mapping (in years).
- Current use of mind mapping: personal, professional, both, or neither
- Explain how mind mapping is used in a personal context.
- Explain how mind mapping is used in a professional context.
- Previous use of mind mapping for change (yes/no).
- Explain how mind mapping was used for a change project.
- Do you have any additional comments about mind mapping, organizational change, or both?
- If mind mapping has never been used for a change project, have or would you ever consider it?
- Explain how you have or would consider using mind mapping for a change project.
- Explain the potential reasons/situations in which you would consider the use of mind mapping for a change project.

- Explain why you would not consider using mind mapping for a change project.

Survey Items for Organizational Change Assessment (OCRA) (Russell, 2010)

Please think of a change in your organization and rate each of the following statements with how the change was perceived by the majority of employees in the organization. The following scale represents that level of agreement. Indicate your level of agreement with the statement in the box to the right of each statement.

Scale: -3=strongly disagree; -2=disagree; -1=slightly disagree; 0=not sure; +1=slightly agree; +2=agree; +3=strongly agree
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Organizational Support Component

1.	The organization's vision is truly a "shared" vision in that employees at all levels understand, value, and work toward accomplishing this vision through their daily work.
2.	Decision making and authority are decentralized (there are multiple levels of decision makers throughout the organization-decision making isn't centralized at the top).
3.	Employees have, in the past, actively participated in organizational decision making, goal setting, and organizational change initiatives.
4.	Employee ideas and suggestions for improving their work and the organization are listened to.
5.	Employees view the organization's training and development programs as effective and supportive of change-driven training needs.
6.	The organization is effective at setting and achieving measurable performance goals and targets.
7.	The organization effectively uses multiple communication channels to routinely and effectively communicate with employees.

Cultural Component

8.	The organization's culture (i.e., its deeply held beliefs, values, and assumptions) is open and receptive to new ideas, innovation, and change.
9.	Real teamwork and collaboration exist within and between organizational work units/departments.
10.	There is a high level of trust between leaders and employees.
11.	When the going gets tough here, people tend to stick together and help each other out.
12.	Employees generally feel encouraged to innovate, offer ideas, and take risks.
13.	During past change initiatives, employees have generally stepped up and actively participated in helping to shape and implement these changes.
14.	People here generally feel that they are personally responsible for their own success.
15.	People are aware of the forces driving change that exist outside the organization.

The Change Environment Component

16.	The proposed change and its effects on all organizational dimensions (e.g., structure, strategy, processes, workflow, systems, etc.) are clearly defined and understood by those leading the change.
17.	When the change is completed, we'll be able to gauge our success with the change effort (there are clear measures to evaluate the change results).
18.	The organization has successfully implemented change initiatives in the past.
19.	The reason or the "why" of the coming change can easily be translated into tangible evidence that will get the attention of the employees.
20.	The number of change initiatives currently underway feels manageable by employees who are the most affected by any change.
21.	The perceived benefits from the change are greater than the perceived losses or disadvantages.

Employee Attitudes and Behavior Component

22.	Employees feel a sense of urgency-a felt need-for change.
23.	Employees have a high level of job engagement (job engagement reflects employee commitment to their jobs and the company).
24.	Employees feel able to make decisions and act independently concerning their daily work.
25.	Innovators, entrepreneurs, and risk takers exist at all levels of the organization.
26.	Employees are generally receptive to change vs. feeling that "this too shall pass".
27.	When change happens, employees typically feel that they have the opportunity to influence or affect the change.
28.	Employees have confidence in their manager's ability to successfully guide them through the change.

Note. Adapted from "Measuring Organizational Change Readiness" [Organizational Change Readiness Assessment Survey], by J. Russell, 2010. Copyright 2010 by Russell Consulting Inc. Printed with permission.

Scoring of the Organizational Change Readiness Assessment (OCRA)

Score	Readiness Level
> 0	Not ready for change. There is no interest.
1-27	Low. Likely to jeopardize the success of your change initiative.
28-56	Moderate. May have success with careful implementation and attention to issues identified in lower scoring components.
57-84	High. Already successful implementing. Organization is aligned and receptive to the idea of change.

Note. Adapted from "Measuring Organizational Change Readiness" [Organizational Change Readiness Assessment Survey], by J. Russell, 2010. Copyright 2010 by Russell Consulting Inc. Printed with permission.

APPENDIX B

Permission to Reprint OCRA Survey



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March 4, 2015

Brenda,

We're happy to give you permission to use the OCRA in your research. All we ask is that you retain our copyright on any copies of the OCRA you use, that you credit our work in your dissertation, and that you send us a copy of your final dissertation.

We also want to ensure that you are using the latest version of the OCRA. While the questions haven't changed, we have made a few cosmetic changes and some changes to the scoring/interpretation section. It would be helpful if you forwarded to us the edition you are using now so we can verify it is the right version.

Can you tell us how you obtained the OCRA initially? Did we send you a copy some time ago or did you receive it from someone else?

Looking forward to helping you with your dissertation.

Handwritten signatures of Jeff and Linda. The signature for Jeff is on the left, and the signature for Linda is on the right, with a small symbol between them.

Jeff and Linda

APPENDIX C
IRB Approval Notice

PEPPERDINE UNIVERSITY

Graduate & Professional Schools Institutional Review Board

November 6, 2014

Protocol #: E1114D01
Project Title: An Assessment of the Attitudes Toward the Use of Mind Mapping with Organizational Change Practices

Dear Ms. Wilson:

Thank you for submitting your application, *An Assessment of the Attitudes Toward the Use of Mind Mapping with Organizational Change Practices*, for exempt review to Pepperdine University's Graduate and Professional Schools Institutional Review Board (GPS IRB). The IRB appreciates the work you and your faculty advisor, Dr. Davis, have done on the 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 - <http://www.nihtraining.com/ohsrsite/guidelines/45cfr46.html>) that govern the protections of human subjects. Specifically, section 45 CFR 46.101(b)(2) states:

(b) Unless otherwise required by Department or Agency heads, research activities in which the only involvement of human subjects will be in one or more of the following categories are exempt from this policy:

Category (2) of 45 CFR 46.101, research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: a) Information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and b) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

In addition, your application to waive documentation of informed consent has been **approved**.

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 a **Request for Modification Form** to the GPS IRB. Because 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 GPS IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite our 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 GPS IRB as soon as possible. We will ask for a complete explanation of the event and your 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 GPS IRB and the appropriate form to be used to report this information can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* (see link to "policy material" at <http://www.pepperdine.edu/irb/graduate/>).