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Using Design Thinking for Organizational Development and Addressing Change

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
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Abstract

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Keith T. Matsumoto

MBA, The University of Michigan at Ann Arbor, 1984

BSCE, University of Pennsylvania, 1979

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Organizations that lack competitiveness may not survive changes in market conditions due to the inability to understand customer needs and problems. Small business leaders who do not address customer needs, identify market changes, and market demands may not maintain competitiveness. Grounded in the design thinking framework, the purpose of this qualitative single case study was to explore organizational development processes used by small business leaders to address evolving market conditions and maintain competitiveness. The participants included five executive management team members from one organization in Hawaii who used effective organizational development processes to manage evolving market conditions and maintain competitiveness. Data were collected from semistructured interviews and document reviews. Data were analyzed using Yin's 5-phase cycle. Three themes emerged: becoming a learning organization, problem seeking and identifying organization, and user-focused and market-driven organization. The key recommendation is for executive managers to use design thinking as their transformational organizational development process to enable small business leaders to be more competitive and deal with changing market conditions. The implications for positive social change include the potential for small business leaders to create more jobs for residents and benefit underserved and disadvantaged individuals, families, and youth for community betterment.

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Dedication

I dedicate this doctoral study to my parents, Albert and Edith Matsumoto, for their continued support, guidance, and love. I thank and dedicate this study to my children, Keshia and Mikaela Sakamoto-Matsumoto, for their commitment and love. I also dedicate this work to my grandparents and relatives whose hard work made this accomplishment possible. This study is also dedicated to those individuals and institutions in Hawaii who have and continually exhibit the courage to challenge the status quo and practice design thinking to make a difference in the state, our communities, and the people, especially children of Hawaii.

Acknowledgments

I am thankful for the faculty of Walden University for their sharing their knowledge and expertise, guidance, and support during this doctoral journey. I am especially thankful for Dr. David Blum, my committee chair, mentor, and academic Sherpa. I thank Dr. Jonathan Schultz, my second committee member, and Dr. Kenneth Gossett, my URR, for their work on my committee and their guidance and commitment to excellence.

I would like to express my heartfelt appreciation for my classmates for their words of encouragement, help, and support during this challenging and rewarding experience. This doctoral study effort was an exceptionally long journey with challenges and victories. The experience was a multiyear-long exercise in having a growth mindset.

I am indebted to my partners and essential collaborators, Ian Kitajima, Kevin Kawahara, and Raviraj Pare. I would like to thank my friends who provided support and encouragement throughout my life and educational journey, and those who have volunteered to support the adoption of design thinking in the state of Hawaii.

Mahalo to all and Aloha!

Table of Contents

List of Tables

List of Figures

Section 1: Foundation of the Study

Organizational change is a major challenge for many business leaders (Tasler, 2017). Small businesses constitute 99% of U.S. companies and employ 47.5% of U.S. workers (U.S. SBA Office of Advocacy, 2018). In this study, I explored the use of the design thinking framework in a small business context on a process used for organizational development for addressing change.

Background of the Problem

Organizational leaders should accept that change is ongoing and should create an adaptive organization able to assess and make adjustments (Kirby, 2019). Successful change management is a significant concern for leaders to maintain competitive advantage which involves adapting to changes in markets (Kalali & Heidari, 2016). Al-Haddad and Kotnour (2015) examined various conventional change management models such as Kotter's process for leading change and Lewin's unfreeze-change-refreeze process. The failure rate of organizational change initiatives may be as high as 70% (Tasler, 2017).

Small businesses entrepreneurs are challenged to evolve to meet future challenges and manage cash flow in order to survive (Trifu & Stirbu, 2015). Small business owners should improve their core competences through innovation and collaboration to be fully effective in diagnosing and addressing market drivers and remain competitive (Rahman & Ramos, 2010). Small and medium enterprises are regarded as important backbones of most economies across the world (United Nations, 2020).

Ramon and Koller (2016) stated that an organization should incorporate elements of innovation, decision-making, and accumulated experience as an adaptive advantage to address changing environmental circumstances. Dickens (2015) noted that the application of organizational development for organizational change has been adopted by several practitioners. For business leaders to adapt and survive in a dynamic business environment, leaders should consider employing organizational development to reshape the organizational culture of the business (Dickens, 2015). Small business leaders need to implement organizational development processes to respond to evolving markets and sustain business competitiveness.

Problem Statement

Business leaders should consider organizational development strategies complemented with strategic change programs to address the unstable business environment for competitive advantage (Ionescu & Bolcas, 2019). Small business leaders are challenged to address trends in the business environment as up to 50% of small businesses fail within the first five years of establishment (U.S. Bureau of Labor Statistics, 2020). The general business problem was that inadequate organizational development processes might jeopardize the competitiveness of the business. The specific business problem was that some small business leaders lack effective organizational development processes to address evolving market conditions and maintain competitiveness.

Purpose Statement

The purpose of this qualitative single case study was to explore organizational development processes small business leaders use to address evolving market conditions and maintain competitiveness. The specific population for this study was the 10-person executive management team of a small business located in the Honolulu business district, in the state of Hawaii. The identified enterprise was appropriate for the study as leadership survived the changing environment for high technology Congressionally earmarked research and development funding in 2011. The implications for positive social change include underserved and disadvantaged families and youth benefitting through a better understanding of stakeholder priorities resulting in increased opportunities to secure funding and provide targeted services for community betterment.

Nature of the Study

Researchers use the qualitative research method as an emergent, interpretive, and naturalistic approach for the study of people, cases, phenomena, social situations, and processes in their natural settings (Yilmaz, 2013). Qualitative research can be used by researchers to provide insights through descriptive terms the meaning people connect to their experiences (Yilmaz, 2013). The qualitative research method was used for this study. Researchers use the quantitative research method to examine data in numerical form and the measurement and evaluation of variables (Park & Park, 2016). The quantitative research method was not appropriate as numerical data was not collected and the relationships or differences among variables were not examined in the study. Johnson et al. (2007) found that mixed methods are appropriate when combining qualitative and

quantitative methods. As this study only involved qualitative research, the mixed-method approach was also not suited to the study.

Case study design was used in this study. Yin (2014) explained that case study researchers operate to understand complex social phenomena and maintain real-world perspective to examine situations such as managerial and organizational processes. Runfola et al. (2017) stated that the primary source for data used in case study is from interviews to gather rich empirical data. The case study design was appropriate for this study as I explored the *how* and *what* of one case.

Other research designs were considered. Kaivo-oja (2017) indicated that researchers use phenomenological designs to consider the reflections of lived experiences of individuals experiencing a phenomenon. The phenomenological design was not appropriate for the study as I did not explore the lived experiences of participants. The ethnographic design is associated with the study of people and cultures in real-life settings (Marshall & Rossman, 2016). The ethnographic design was not appropriate for this study as I did not explore group cultures.

Research Question

What organizational development processes do small business leaders use to address evolving market conditions and maintain competitiveness?

Interview Questions

1. How has your organization used organizational development processes to address evolving market conditions and to maintain competitiveness?

2. How did you address the key challenges to implementing organizational development processes to address evolving market conditions and to maintain competitiveness?
3. What were the key barriers to implementing organizational development processes to address evolving market conditions?
4. How have you measured the effectiveness of your organizational development processes to maintain competitiveness?
5. What additional information can you provide about your organization's need to address evolving market conditions and to maintain competitiveness?

Conceptual Framework

The conceptual framework that was used in the study was the design thinking framework through attitudes of collaboration, innovation, risk-taking, and organizational learning for business competitiveness (Lockwood & Papke, 2018; Wyrwicka & Chuda, 2019). Fundamental constructions/propositions underlying the framework are (a) empathize, (b) define, (c) ideate, (d) prototype, and (e) test (Matthews & Wrigley, 2017). Figure 1 represents the open-source Stanford d.School 5-stage design thinking process.

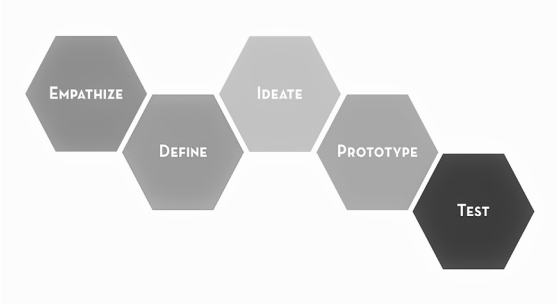

Figure 1. Stanford d.School design thinking process modes of the open source design thinking process. Process modes of the open source design thinking process. Reprinted with permission.

Rahman and Ramos (2010) stated that small business owners generally lack the core competencies to remain competitive. Change has an impact on every aspect of organizational leadership, including strategy, structure, and operations (Kanter, 2000). The Stanford d.School design thinking process was appropriate for my study as the design provided a lens to explore how small business leaders used organizational development processes to address changing market conditions and maintain competitiveness.

Operational Definitions

Design thinking framework/process: A human-centered, non-linear iterative process involving user exploration, examination of the design space, brainstorming, prototyping, and testing involving 5 phases – emphasize, define, ideate, prototype, and test (Matthews & Wrigley, 2017).

Nonprofit organization: A tax-exempt entity with a purpose to serve the public good through a religious, or educational purpose (Kim, 2015).

Assumptions, Limitations, and Delimitations

Assumptions in qualitative research are defined as facts that cannot be verified by the researcher (Theofanidis & Fountouki, 2018). There were five assumptions that may have influenced the study. First, I assumed that a single case study design was appropriate. Second, I assumed that the population selected for the study was appropriate to address the research question. Third, I assumed that all participants were honest, open, and truthful. Fourth, within the design of the study, I assumed that a minimum of five semistructured interviews was adequate to reach data saturation. Fifth, while the study was focused on a single entity, I assumed the results may be transferable to other businesses and nonprofit organizations.

Limitations refer to weaknesses or influences of a study that the researcher is unable to control (Theofanidis & Fountouki, 2018). The study included three limitations. First, the single case study design may not provide results generalizable to other entities. Second, the ability for participants to remember past experiences during the short interview session may limit the data collected. Third, participants may be hesitant to disclose confidential company information.

Delimitations are defined as identifying the bounds or scope of research (Theofanidis & Fountouki, 2018). Delimitations of the study included the research question, conceptual framework, and study population. The scope of the research was limited to a single entity in Honolulu, Hawaii with the population as the executive management team of the organization. The minimum sample size was four, and interviews continued until data saturation was achieved when no new information was

gathered from interviews. As the study was focused on a single organization, the results may not be applicable to the larger population of small business leaders in Hawaii and the United States.

Significance of the Study

Contribution to Business Practice

The study findings may be of value to business leaders who are seeking organizational development processes to enhance innovation and effective business strategies using the design thinking framework. The results of the study may contribute to processes for small business leaders to enhance organizational development and implement change management strategies to address market conditions and maintain business competitiveness. This study may also contribute to the effective practice of small businesses by leaders implementing design thinking as an organizational development strategy and addressing change for the business. This study may also support the improvement of business practice by identifying processes to support adaptability and enhanced organizational learning and a culture able to address future change.

Implications for Social Change

This study may contribute to positive social change by supporting small business leaders, which may result in more jobs for students, seniors, and mentally and physically challenged individuals as well as increased profits. The implications for positive social change include benefitting underserved and disadvantaged individuals, families, and youth through more job opportunities. Increased business profits and taxes translate to

increased government and private funding and targeted services for community betterment.

A Review of the Professional and Academic Literature

The study was a qualitative single case study to explore what organizational development processes small business leaders use to address evolving market conditions and maintain competitiveness. Business leaders should be willing to adapt to change to survive changes in the environment (Dey, 2017). Small business leaders are challenged to balance current and future relevance and consider adaptability and innovation as a competitive advantage.

The purpose statement and research question were used to develop the content for the literature review. I considered the outputs from the literature review as the context for the study and a basis for future research and studies. The body of literature was examined to consider the design thinking process.

Database searches were conducted through the Walden University Library to conduct the literature review and included databases such as Business Source Complete, Emerald, Pearson Education, ProQuest Central, SAGE Premier, and ScienceDirect. The results from the various database searches were compiled to complete the literature review. Academic and peer-reviewed articles were sought about business *strategy, design thinking, evolving markets and competitiveness, innovation, organizational development,* and *small business* to search each database and develop a critical literature review. Alternative theories/frameworks were examined as part of the review of the literature.

The professional and academic literature review commences with the conceptual framework, design thinking, followed by a section on the business application of the conceptual framework for *innovation, business strategy,* and *project management*. Other frameworks complementary to the conceptual framework and a critical analysis of the conceptual framework are included. An examination of the study elements of *small business, organizational developmen*t, and *evolving markets and competitiveness* with the conceptual framework follows the section on the conceptual framework. A review of alternative theories/frameworks on *change management* complete the literature review.

Numerous academic sources were examined to meet the 85% requirement by Walden University. The 184 references that comprised this study included 165 scholarly peer-reviewed articles, representing 89.7% of the total; four websites, representing 2.2%; and 15 books, representing 8.2%. The total references published within the past 5 years was 155, which was 84.2% of the total number. The literature review contains 134 references, with 124 references published within the past 5 years, representing 92.5%, and 129 from scholarly peer-reviewed sources, representing 96.3%. Table 1 shows the synopsis of sources in the literature review.

Table 1

Synopsis of Sources in the Review of Professional and Academic Literature

Reference type	Total	Fewer than 5 years	Greater than 5 years
Research-based peer-reviewed journals	165	155	10
Books	15		
Websites	4		

Fundamental Constructions/Propositions of Design Thinking

Simon (1996) used the term *design thinking* in the context of changing existing circumstances for new, preferred options. Scholarly work on design thinking has grown in popularity, and the merits of design thinking on an anecdotal basis are found in existing literature (Liedtka, 2015). Brown (2009) stated that the term design thinking is defined as a discipline using designer methods and practices to match the needs of people with what is feasible. Users of the application of the design thinking process originally focused on improving products and services but have expanded to address more social problems (Brown & Wyatt, 2010).

Brown (2009) suggested that design thinking could be considered as a system of spaces for inspiration, ideation, and implementation. Various models of design thinking exist with five, and six steps, all expressing the three spaces and promoting collaboration, critical thinking, curiosity, empathy, experimentation, facilitation, and rigor (Noel & Liub, 2017). Liedtka (2015) noted that design thinking can be confusing, resulting from varied definitions of model components.

The utility of design thinking endures from lack of understanding of cultural component of organizations (Elsbach & Stigliani, 2018). Rowe (1987) focused on the use of design thinking for architectural design and urban planning. The current emphasis on business management use for design thinking gained popularity from Brown's 2009 book titled *Change by design*. To address the confusion of design thinking models and utility, I focused on the design thinking framework popularized by the Hasso Platner Institute of

Design at Stanford University for use in business management. Stanford's design school was responsible for disseminating the term design thinking and popularizing the five modes (Pope-Ruark, 2019).

Design thinking as described by Brown (2009) as featured by the Stanford Design School were used in this study. The modes of design thinking are (a) empathy through understanding and observation, (b) define, (c) ideate, (d) prototype, and (e) test (Daniel, 2016). Wyrwicka and Chuda (2019) described the practice of design thinking as activities involving understanding needs and problems, insight formation, rapid learning, creating, testing, and feedback. The process is based on cyclical five steps, and practitioners of design thinking depend heavily on input and feedback from the user (Armstrong & Johnson, 2019).

Empathy

Empathy is the process of gaining a deep understanding of the user by making and building connections on a fundamental level (Brown, 2009). Empathy is foundational to understand and share the feelings of individuals about problems or situations (Lockwood & Papke, 2018). Design thinking does not begin with a presumed answer or a well-defined problem (Mintrom & Luetjens, 2018). Brown (2009) described the process of empathy gathering as learning to understand another person's perspectives. Shively et al. (2018) stated that the empathy mode involves imagining what another person experiences. Design thinking is described as the process of conceiving and actualizing solutions to problems based upon the ideas and evolution of information gathered from stakeholders and users (Chesley et al., 2018). These processes influence business

strategies for innovation and problem solving (Lockwood & Papke, 2018). The information received from the empathy gathering mode is used by users in the define mode of design thinking (Schumacher & Mayer, 2018).

Define

The define mode of design thinking involves the unpacking of data from empathy gathering by the user to construct statements expressing the user's point of view (Schumacher & Mayer, 2018). Armstrong and Johnson (2019) described the define mode as involving looking at the problem from a personal viewpoint based on the understand of the user. Carefully defining the problem is an essential stage and may require a reframing of the original problem based on data gathered from the user (Shively et al., 2018). Reframing the problem by use of inferences and synthesis is critical to enhancing the user experience (Beaird et al., 2018; Colombo et al., 2017). The define mode concludes with the development of "How Might We" opportunity statements to address user needs and insights gained from the empathy mode and transition to the ideate mode of design thinking (Crisan & Caldarusa, 2017; Schumacher & Mayer, 2018).

Ideate

The ideate mode is described as generating unique and radical ideas, emphasizing quantity over quality (Armstrong & Johnson, 2019). Schumacher and Mayer (2018) identified brainstorming methods used in the design thinking process, which include listing as many ideas as possible, no judgment of ideas, building on the ideas of others, and identifying potentially unrealistic ideas. Beaird et al. (2018) stated that the ideate mode involves techniques to deepen and broaden ideas. The ideate mode requires

creative and critical thinking (Shively et al., 2018). The list of options generated from the ideation process can be used to develop options to meet the requirements of the user and draw a prototype of an idea (Armstrong & Johnson, (2019).

Prototype

Design thinking helps users develop low-resolution tangible prototypes (Crisan & Caldarusa, 2017). Matthews and Wrigley (2017) emphasized the importance of creating accelerated learning through hands-on experimentation by failing quickly and often. Schumacher and Mayer (2018) stressed the importance of a tangible prototype that users can interact with to provide opinions. Sketches, mock-ups, stories, role-playing, and storyboards have been identified as vehicles to help users create physical prototypes for intangible ideas (Carlgren et al., 2016; Cagnin, 2018; Matthews & Wrigley, 2017; Shively et al., 2018).

Test

Design thinking prototypes are tested with users to gather feedback and new input (Crisan & Caldarusa, 2017; Schumacher & Mayer, 2018). Glen et al. (2014) explained that multiple tests provide the opportunity for clear and honest feedback from many users and encourage continued refinement and development of the prototype and refinement of the options for solving the problem. Crisan and Caldarusa (2017) stated that prototyping and testing are repeated until the solution is ready for implementation. The continued refinement of the prototype through testing provides the design team satisfaction to move towards a \developed model through investment in more prototyping and testing (Beaird et al., 2018).

Business Management Attributes of Design Thinking in Practice

Chesley et al. (2018) studied design thinking and identified the deep understanding of the customer and stakeholders and enhanced creativity and innovation. Meyer (2015) stated that design thinking is being applied in broad organizational settings including gaining statkeholder acceptance. Users of design thinking focus on the engagement of stakeholders in an integrative process for products, services, and business design (Salunkhe & Kadam, 2018). The use of design thinking provides a deep understanding of customer insights and customer experience, and unstated use needs. (Lockwood & Papke, 2018). Lockwood and Papke (2018) outlined the ability of the design thinking user to understand the stakeholder's point and view and needs through engagement with all of the stakeholders involved. Patel and Mehta (2017) studied design thinking and found that design thinking is pivotal in identifying real needs and designing innovative products. Design thinking has been described as a productive, iterative approach to engage divergent thinking, acknowledging the social, cultural and political factors, to address wicked problems (Greenwood et al., 2019). Clegorne and Mastrogiovanni (2015) and Chow (2018) outlined how a new paradigm was needed to address "wicked problems" or problems that are extremely difficult or thought to be impossible to solve due to incomplete, contradictory, and changing requirements to include the interconnection of the problem with other problems. Design thinking is adaptable and provides a process to address wicked problems and manage change in organizations (Hehn & Uebernickel, 2018). The design thinking process supports a distinctive, logical approach for problem identification and formulation (Weedon, 2019).

Wyrwicka and Chuda (2019) found that using design thinking as a change process was positive and supportive of the required employee abilities and attitudes which contributed to enhanced innovation capabilities. Kurtmollaiev et al. (2018) stated design thinking utilizes the iterative use of techniques and activities throughout the process. Mosely et al. (2018) noted that design was a problem-solving approach through creativity and innovation.

Mustafic et al. (2019) found that complex problem solving using creation, selection, and integration of knowledge supported successful problem-solving. Kurtmollaiev et al. (2018) stated that design thinkers use abductive reasoning to address poorly defined and complex problems. Cross-functional teams used design thinking to consider poorly defined and complex problems (Luotola et al., 2017).

Dunne (2018) explained that design thinking supported better decision-making, competitive advantage, customer orientation, innovation, organizational learning and transformation. Wyrwicka and Chuda (2019) studied design thinking as a process to change organizational culture. The use of design thinking in organizations supported an experiential learning process that addressed the development of user-centric-focused organizational cultures (Elsbach & Stigliani, 2018).

Brown (2009) outlined an example of how Home Box Office (HBO) utilized the design thinking process to reinvent the organization to become “technology agnostic” and focus on delivering a new vision of the HBO customer experience. Through the development of prototypes, HBO executives re-envisioned the organization which resulted in the development of a roadmap to consider elements of technology, business,

and culture that would drive the organization forward (Brown, 2009). Hall (2018) outlined how organizational leaders embarking on change initiatives should have deep stakeholder understanding Lewis et al. (2017) found design thinking was advantageous for transformational and breakthrough innovation by using strategic partnerships and relationship development. Eng et al. (2019) stated design thinking was a valuable system for businesses with companies using the design thinking process outperforming competitors.

Moreno and Villalba (2018) suggested design thinking supports unique solutions and differs from transdisciplinary design in application but is useful for short- to medium-term project development. The incorporation of constraints, even competing constraints, could be the foundation of design thinking and would provide the basis by which alternatives are considered (Brown, 2009; Butler & Roberto, 2018). The three typical constraints utilized for innovation and considered in design thinking are desirability, feasibility, and viability (Carlgren et al., 2016).

Desirability, Feasibility, and Viability

Carlgren et al. (2016) found desirability, feasibility, and viability as benefits of design thinking although there are few practical tools to work with feasibility and viability. Hehn and Uebernickel (2018) claimed design thinking supports innovation to integrate the needs of people, technical possibilities, and business success requirements. Leaders consider desirability to determine if a product, service, or other offering is wanted by potential users and can be assessed by the question, “Will it be valued?” or, “Is there a market for this?” (Hunsaker & Thomas, 2017).

Leaders consider feasibility to determine if the desired goal is technically possible and can be assessed by the question, “Can it be done?” (Hunsaker & Thomas, 2017). Leaders consider feasibility to determine if a product, service, or offering can be assessed through the steps of (a) opportunity identification, (b) validation of the opportunity, (c) development of an offering, (d) scaling for profitability, and (e) ongoing improvement of the offering, which involves the continuous improvement of the product or service (Hunsaker & Thomas, 2017). The feasibility of an offering was engineering-focused and considered technology, cost, and time (Hunsaker & Thomas, 2017.)

Leaders consider viability by asking the question, “Can it succeed?” (Hunsaker & Thomas, 2017). Viability involves the assessment of the marketing and financing of a product, service, or offering. The viability of a product, service, or offering was business-focused on profitability and the ability to maintain ongoing competitive advantage (Hunsaker & Thomas, 2017).

When leaders implemented design thinking, Butler and Roberto (2018) found it helpful to reframe questions to avoid fixation on a solution to support brainstorming to develop concepts before moving to low-resolution prototyping. While the tendency was for organizational leaders to desire to develop perfect, “finished” prototypes, the design thinking process supports low-resolution prototyping and solicit quick feedback (Butler & Roberto, 2018). The bottom line was that prototypes are used to generate useful feedback and as starting points for the next level of idea or prototype (Butler & Roberto, 2018). Menold et al. (2016) found that the use of prototyping for viability, prototyping for feasibility, and prototyping for desirability increased user satisfaction for final

designs, improved perceived value of final designs, created higher technical quality of designs, and enhanced viability for manufacturing of products.

The attributes of design thinking were found to be transformative for organizations (Butler & Roberto, 2018). Companies such as Apple, Google, Mattel, Mazda, Nintendo, Proctor & Gamble, Xerox, and Zyliss have successfully used the process in product and service redesign to meet evolving markets and remain competitive (Brown, 2009). Matthews and Wrigley (2017) stated that General Electric, Proctor & Gamble, Sony, and Philips had used design thinking as a problem-solving tool. Organizations have used design thinking to spur innovation but also used the approach to establish a common process for team building and work projects (Dziadkiewicz, 2017).

Innovation and Applied Design Thinking

The design thinking process is a human-centered innovation process (Bazzano et al., 2017). Waerder et al. (2017) stated that in times of market pressure, innovations are valuable currency. Bourke and Crowley (2016) examined the types of organizational human resource management changes that were most beneficial for firm innovation and concluded that collaboration and outsourcing practices the most valuable. Stoilkovska et al. (2015) proposed an essential characteristic for competitive advantage was innovativeness. Jaakson et al. (2018) stated that innovation may be required for company survival and success in a dynamic economic environment such as biotechnology. The ability to innovate was embedded in the organizational culture along with the corporate commitment to innovation and was referred to as organizational innovativeness (Jaakson et al., 2018).

McKinley et al. (2014) suggested that managers inhibit innovation by prioritizing efficiency, cost containment, accountability, and organizational rigidity. Aarons et al. (2015) indicated that leadership was essential for effective implementation of innovation in an organization. The alignment of organizational strategies with leadership effectiveness across various levels of an organization increased the probability of successful organizational change implementation and sustained corporate change (Aarons, et al., 2015).

Carlgren et al. (2016) stated that internal barriers to innovation exist. Liedtka (2018) examined how design thinking positively addressed the three challenges of innovation by focusing on customer experience, idea generation, and the testing experience. Design thinking was described as a structured process to support innovation (Liedtka, 2018). The use of design thinking helped create a better understanding of customer needs and desires which enhanced the ability for the organization to be innovative and competitive (Waerder et al., 2017).

Several major corporations have adopted design thinking for innovation, team work, problem finding and identification, and problem-solving (Lockwood & Papke, 2018). Researcher have found that companies use design thinking to spur innovation but also used the approach to establish a standard process for team building and work projects (Dziadkiewicz, 2017). Schiele and Chen (2018) stated that design thinking was recognized for effectiveness in innovation.

Brown (2009) provided rules for an approach to innovation through bottom-up experimentation. Design thinking rules encouraged experimentation that supported the

identification of opportunities and test the accuracy and quality of the proposed solutions (Chou, 2018). Brown stated that ideas should be author neutral, and ideas that create a buzz should be favored. The role of senior leadership should be to ensure open and engaged dialogue to support the desired organizational culture where transparent communications and employee engagement are valued (Snyder et al., 2018). Brown (2009) stated innovation is a compelling idea if executed well; however, the over-emphasis on the "good idea" often results in market failure.

Design thinking practitioners provide opportunities for creative solutions based on understanding of the problem, the customer, and the need (Snyder et al., 2018). While structures and processes are important in organizations, there are questions on how structures and processes can be used to enhance innovation (Snyder et al., 2018). Volkova and Jakobsone (2016) analyzed the awareness of design thinking to highlight innovative management methods and tools to build organizational capabilities and sustain competitiveness in the challenging business conditions and to improve the welfare of society and create a better environment for the living. Gerlitz et al. (2016) found a relationship between innovation and the use of design thinking.

Brown (2009) described the power of design thinking as an end to old ideas and argued that the purely technocentric view of innovation was not sustainable. Brown (2009) proposed that a need exists for an approach to innovation that was powerful, effective, accessible, and integrated all aspects of business and society with which individuals and teams can make a significant impact. Baraldi Alves dos Santos et al. (2018) outlined how design thinking supports the practice of open innovation. Baaki et al.

(2017) described how the use of external representations framed by context, information, and constraints support the movement towards novel, viable solutions to problems.

Hsu (2015) noted how organizations can utilize innovative research and development, marketing, and design resources through a value co-creation method for improved new product development performance. Hsu (2015) was the first researcher to conduct an empirical study to examine critical factors associated with product innovation, marketing, design, and value co-creation strategies for new product development. Gracio and Rijo (2017) validated the critical components of design thinking which support multidisciplinary teams and collaboration for innovation. Liedtka (2018) outlined how design thinking's structure provides a framework that allows organizations to adapt to new behaviors required for innovative research and development, including user experience immersion, sense-making, alignment, and articulation. Docherty (2017) and Liedtka (2015) advocated that design thinking be adopted as a practice for improving innovation outcomes.

Challenges of Innovation and Applied Design Thinking

Innovation involves major uncertainty, and benefits are not guaranteed or materialize immediately (Lichtenthaler, 2016). Design thinking was found to impact innovativeness and customer engagement, which enhances commercial potential and reduces market risk (Gobble, 2014). The use of the design thinking process can generate breakthrough innovations or improvements to existing products and services (Dziadkiewicz, 2017; Gobble, 2014). Gobble (2014) and Liedtka and Kaplan (2019) found that the use of design thinking did not produce immediate results in terms of

market share or profitability but may generate creativity, superior solutions, lower risks and costs, and support employee buy-in.

Gobble (2014) found creativity was translated into enhanced innovative products and services, which supported better firm performance. Chen and Adamson (2015) suggested that a new model built upon collective attention, enacting ideas, and building on similarities could provide opportunities for radical innovation. Liedtka (2015) stated rigorous empirical inquiry was required to support the examination of the benefits of design thinking for innovation.

Business Strategy and Applied Design Thinking

Lam (2017) explained that design thinking offers strategic value to provide a holistic approach to understanding and solving real world problems. Design thinking may be used to gather, examine, and leverage organizational performance data (Phillips & Phillips, 2018). Design thinking for business strategy requires the use of concept visualization and delivery of new products and services (Cooper et al., 2009). Böhle et al. (2016) found that uncertainties are a part of life and everyday business. Change has an impact on every aspect of organizational leadership, including strategy, structure, processes, people, and culture (Kanter, 2000). Strategically changing behaviors of employees on a large scale were critical to supporting successful organizational change (Swanson, 2015). Tobias (2016) argued that many strategic organizational change initiatives fail due to the lack of personal involvement and authenticity by leadership.

Business leaders should be willing to adapt strategically to survive changes in the environment (Dey, 2017). Liedtka and Kaplan (2019) claimed that design thinking

provided opportunities for use in strategic development. Feher and Varga (2019) found design thinking bolstered the discovery of valuable customer information to support strategic decisions. Kurtmollaiev et al. (2018) linked design thinking with a dynamic capabilities framework to consider the strategic influence of design thinking. Chou (2018) outlined how design thinking can benefit social entrepreneurship. Manzini (2018) stated that design for social innovation must include uses and external experts. Blomkamp (2018) found co-design for public policy could be used to address specific biases of innovators by providing a better understanding of those being considered, create new insights and possibilities, improve clarity on assumptions, develop understanding of what really mattered, deliver accurate feedback, and boost shared commitment and confidence in the product or strategy. Ali and Ivanov (2015) concluded that encouraging teamwork; supporting fair employee evaluations; and addressing employee fears is essential for leadership to understand the corporate culture to support organizational success.

Various organizations used design thinking to (a) drive a post-merger integration process, (b) develop and implement new strategies, (c) redesign service experience, (d) reimagine sales processes, (e) transform marketing, (f) gain a broad understanding of industry-wide consumer needs, (g) develop corporate strategy, and (h) embed enthusiasm to employees for creativity and experimentation for products (Brown, 2009). For example, General Electric, Proctor & Gamble, Sony, and Philips have used the design process for problem-solving (Matthews & Wrigley, 2017). Business strategies for

enhanced branding are additional outcomes that are beneficial to business leaders (Pamfilie & Croitoru, 2018).

Leach et al. (2017) found the need to develop internal capabilities was crucial for managing change. Carlgren et al. (2016) stated that organizational leaders should consider organizational processes and structures that inhibit innovation. Leaders need to be aware of the organizational dynamics involving skill and communications to support design thinking (Carlgren et al., 2016). Brown (2009) stated that while design thinking was executed in groups, the process does not support "group think" which suppresses creativity. Meyer (2015) found design thinking was used to uncover creative solutions to client problems and allowed for a maintaining a big picture approach, in context, to solving difficult problems.

Garbuio et al. (2018) outlined an 8-step approach to better opportunity generation and business model ideation, which may be applicable to business and academia to support entrepreneurial mindsets. The steps to creating better opportunity generation and ideation began by participants describing the current problem then reframing the problem from different perspectives (Garbuio et al., 2018). Participants would propose innovative ideas to address the issue (Garbuio et al., 2018). The participants would then restate the revised problem followed by solution framing or the process of describing and interpreting potential solutions (Garbuio et al., 2018). The next step involved transferring the solution framing for the restated problem (i.e. How might we?) and using explanatory abduction to validate the problem and potential solutions (Garbuio et al., 2018). Finally, the steps included expounding new opportunities and mechanisms to support those

opportunities and piloting the solutions (Garbuio et al., 2018). Garbuio et al. (2018) stated that the ongoing actions of observing and reframing allowed entrepreneurs to recognize evolving user needs and to adapt products and strategies to meet customer desires.

Challenges of Business Strategy and Applied Design Thinking

The use of design thinking requires different forms of thinking and analysis (Brown, 2009). Meyer (2015) stated that design thinking provides a guard against "analysis paralysis." Design thinking requires a culture of experimentation, which was not a common practice (Carlgren et al., 2016). Design thinking was found to examine contradictory concepts and allow for radical innovation and incremental innovation because of stakeholder involvement (Zheng, 2018). Puranam et al. (2014) noted that organizing was differentiated from organizations where organizing was reported to be a process like problem-solving. The problems of organizing may be addressed by novel and unique solutions (Puranam et al., 2014).

The use of design thinking was found to support an experiential learning process that supports the development of user-centric focused, collaboration, risk-taking, and learning organizational cultures (Elsbach & Stigliani, 2018). Boni et al. (2018) encouraged the use of appropriate business models for the type of innovation desired. The use of collaborative, open innovation was encouraged with design thinking (Boni et al., 2018). Elsbach and Stigliani (2018) stated that design thinking comprises an approach to problem-solving that uses tools of convention design to address issues related to organizational culture. Boni et al. (2018) outlined how the culture of an organization

should adopt a user-centric focus to support needs-driven innovation. Mahmoud-Jouini et al. (2016) found design thinking could bridge areas of shortcoming in standard project management approaches due to rapid change, requirements for innovation, and enhanced complexity.

Project Management and Applied Design Thinking

Ewin et al. (2017) stated that failures of projects have been attributed to the human aspects of project management. Project management processes and the training of new project managers by organizational leaders should consider the impact of organizational change (Hornstein, 2014). The use of complex-project capability was studied and involved dynamic, non-linear organizational learning and knowledge creation over project lifecycles (Ahern et al., 2015). Ahern et al. (2015) found that the use of complex-project capability by project managers creates the means for achieving project goals throughout the project life cycle, which complements and extends the traditional approach to project management.

Ewin et al. (2017) noted that design thinking provides project management enhancement by addressing relationship issues through the development of soft skill. Project strategy formulation was found to be an essential element in project management to align with project contexts, environment, and governance (Mahmoud-Jouini et al., 2016). Design thinking was found to address the basic assumptions of the standard project management approach (Mahmoud-Jouini et al., 2016). For example, metaphors helped designers to understand problems by identifying with known conditions using creative thinking (Choi & Kim, 2017). The unfamiliarity of a new capability inhibit

integration but the new skill may be developed to resemble current capabilities (Beltagui, 2018). Stephens and Boland (2015) found design thinking could break down complex problems and develop appropriate solutions.

Mahmoud-Jouini et al. (2016) discovered design thinking addressed shortcomings in project management approaches for situations requiring innovation. Project success can be enhanced with design thinking in conjunction with project management (Dijksterhuis & Silvius, 2017). Liedtka (2018) found design thinking where there is ambiguity, and sense-making is critical to the success of the project. Dijksterhuis and Silvius (2107) suggested design thinking would make a positive impact for new or less experienced project managers.

Challenges of Project Management and Applied Design Thinking

The application of design thinking for second-order project governance and risk management was relatively new, and further research was required to support the efficacy of the explicit use of the framework for project management in conjunction with first-order and/or second-order project management processes. First-order economizing logic for project governance for risk management follows an approach using a logical top-down system model of control with predictable paths (Tywoniak & Bredillet, 2017). Second-order complexity project risk govenance supports a transition to learning to define goals and factors for success, and support resilient organizations capable of overcoming failures (Tywoniak & Bredillet, 2017). Design thinking was found to support the reduction of uncertainty through learning and discovery (Tywoniak & Bredillet, 2017).

In reviewing the professional and academic literature, I found a limited number of articles on the use of design thinking for second-order project management. Hodgson and Cicmil (2016) outlined the value of continued dialogue in new trends for project management, and the importance of coherent research in terms of academic research and practice. Continued research into the efficacy of design thinking to support new models of project management practices was essential and complementary to the Making Projects Critical movement.

Other Frameworks and Design Thinking

Some of the major criticisms of design thinking includethe requirement for a radical change in how organizations do business and the possible emphasis on "thinking" rather than "making" (Cooper et al., 2009).Cooper et al. (2018) noted design thinking has become a corporate buzzword. or fashionable. Alternative theories or frameworks may support or complement the use of design thinking to address known criticisms.

Cleary (2015) compared design thinking to another framework for organizational improvement, Shewhart's plan-do-study-act (PDSA) cycle of improvement. Crowfoot and Prasad (2017) explained the PDSA cycle as a four-stage process which focuses on ongoing development using (a) plan (describe what was going on, perform SWOT and stakeholder analyses, and identify proposed changes), (b) do (implement changes), (c) study (examine and assess if the change has been effective), and (d) act (monitor and plan for a future change). Cleary (2015) examined the PDSA cycle of improvement and found the process would support organizational performance improvement and innovation. PDSA prioritizes identification of stakeholders early in the process to identify and

overcome barriers and challenges (Crowfoot & Prasad, 2017). Cleary (2015) explained that design thinking and PDSA support improvement and innovation, PDSA prioritizes the collection and analysis of data at each step in the process, while design thinking relies on focus groups or face-to-face interviews, and tests in the final step of the process.

Scherer et al. (2016) examined the use of design thinking and business analytics in the Product-Service System (PSS) and validated design thinking by reinforcing the value-add for the use of the methodology. Process enhancement through the understanding of consumer needs and desires was essential to support continued innovation, and organization competitiveness (Scherer et al., 2016).

Glen et al. (2015) examined project-based learning (PL) and found that the reliance on soft skills was chaotic and challenging, and takes time due to the iterative, cyclical model. While PL and design thinking are complementary, design thinking is a process to support complex problem-solving situations and innovation (Glen et al., 2015). Pavie and Carthy (2015) found that design thinking may address complex problems for the integration of responsibility in the innovation process.

Challenges and Disadvantages of Design Thinking

The use of design as a manner of thinking was first outlined as a problem-solving paradigm in Simon's *The Sciences of the Artificial* (1969; Oxman, 2017). Iskander (2018) stated that term design thinking is not well defined, reliant on anedotes, and represents repackaged common sense. . In order for design thinking to be implemented, people must feel that a change is required (Crisan & Caldarusa, 2017). Junginger (2018) noted human-

centered design may not be sustainable. Liedtka (2015) found a lack of research that used a systematic approach with measurable outcomes on design thinking.

Dunne (2018) stated that design thinking may be adopted without a knowledge of the capabilities, limitations, and organizational demands. Design thinking may not be appropriate for all situations (Dunne, 2018). Organizational leaders focused on efficiency may underestimate the exploratory nature of design thinking (Dunne, 2018). Dunne and Martin (2006) and Stewart (2011) outlined how design thinking may be considered a fad rather than a relevant opportunity for novel exploration. Dunne (2018) found that design thinking encounters significant cultural and systemic challenges in organizations. Dura et al. (2019) explained design thinking supports the examination of problems and solutions from a extreme use perspective, but design thinking toolkits and heuristics are limited in the depth and scope for extreme user engagement. For design thinking to be utilized for the complex social-focused applications, deep and expanded use by users is required to be truly impactful (Dura et al., 2019).

Kupp et al. (2017) stated that four cultural factors hinder structural organizational limitations from supporting the implementation of design thinking. Specialization often supports the development of silos, which run counter to design thinking requirements and encourage cross specialization work (Kupp et al., 2017). Kupp et al. identified risk-averse managers, focus on financial results, and fear of failure as cultural factors that inhibit the implementation of design thinking. Liedtke et al. (2017) stated that implementing design thinking in organizations required structure for non-designers to be comfortable using the process.

Liedtke et al. (2017) found proper training by combining classroom instruction with real hands-on experience in the use of design thinking, building a learning community, and embracing diversity and variance to be essential for design thinking organizations. Organizations are built for efficiency and challenging the accepted organizational norms may not be accepted by corporate leaders (Dunne, 2018). Carlgren et al. (2016) identified a challenge for users of design thinking as finding the necessary resources, tight time frame which inhibited innovation, fit within existing incremental processes, pressure not to fail, and requirements for proof of results and quick successes. Dunne (2018) suggested another challenge of design thinking includes conflicts with the organizational culture which often frowns upon failure. Often design teams are isolated from the rest of the organization and burdened with inadequate consideration of corporate constraints and conventional power structures (Carlgren et al., 2016). Greenwood et al. (2019) noted the application of design thinking was predicated on full and engaged participation required to be sufficiently impactful. For full participation, the use of design thinking requires that participants be informed about the mechanisms and principles of the design thinking process (Greenwood et al., 2019). The successful application of design thinking was challenged by user uncomfortableness with ambiguity and dissent (Greenwood et al., 2019).

Carlgren et al. (2016) stated despite the advocacy of design thinking, little evidence exists demonstrating the successful impact of design thinking. Many leaders attempting to use and implement design thinking have experienced challenges (Dunne, 2018). The difficulties encountered have led to impressions of failure for design thinking,

although many factors may have contributed to the inability of design thinking to be effective in organizations (Carlgren et al., 2016).

Design thinking has been widely examined in scholarly works for customer and stakeholder engagement, creativity and innovation, and business strategy. I reviewed the existing literature and found that design thinking supports problem finding, but noted a gap in the existing literature exploring this attribute. My review of the current literature identified that the practice of design thinking might support organizational adaptability, learning, and resilience, but further research is needed.

Alternative Theories/Frameworks

Kotter's Leading Change Methodology

The eight-steps of Kotter's process (Kotter, 2012) are (a) establishing a sense of urgency, (b) creating the guiding coalition, (c) developing a change vision, (d) communicating the vision for buy-in, (e) empowering broad-based action, (f) generating short-term wins, (g) never letting up; and (h) incorporating changes into the culture. Hughes (2016) stated that Kotter's 1995 theory was based primarily on errors of leadership for transformation. Kotter updated the theory in 1996 and focused on ways to transform the organization. Appelbaum et al. (2017) examined the factors that impacted successful organizational change and found Kotter's model of organizational change supported organizational change through employee commitment to change, the use of formal and informal communications, the creation of adaptive organizational systems, and transformational leadership.

Euchner (2013) endorsed the importance of the first three steps of Kotter's model which included creating a sense of urgency, building a robust coalition, and establishing a clear and shared vision for the future. Tanner and Otto (2016) examined job satisfaction and organizational change based on managerial support for reform, superior-subordinate communications, and resistance to change. Tanner and Otto (2016) found that communication during organizational change was critical on the impact of employee readiness to change and how employees handled such change. Hughes (2016) critiqued the Leading Change process by outlining the restrictive nature of (a) defining employee simply as "for" or "against," (b) supporting short-term wins which can act against building trust and goodwill while reinforcing leadership power and control, (c) overemphasizing linear steps of the process, (d) supporting classical and systemic approaches versus evolutionary and processual approached, (e) centralizing of power in leadership and management, (f) under emphasizing cultural contexts, (g) understating the failure rate of change initiatives.

Lewin's Three-state Model of Change

Cummings et al. (2016) stated Lewin's model of change theory involves (a) unfreezing (to dismantle the existing mindset), (b) move (to change from a less acceptable to a more satisfactory set of behaviors), and (c) freeze (to ensure that the new status quo was 'refrozen' into the operations of the organization, and was made safe from regression). Levasseur (2001) explained using the method begins with preparation and motivation for change, communication, and participation. Tkaczyk (2015) noted that the development of the model did not consider organizational issues alone, and was an

approach to an organization-wide, planned change conventionally advocated by problem-solving-focused and eclectic organization development practitioners.

Hughes (2016) outlined how Lewin's three-step paralleled Kotter's (2012) eight-steps and the overemphasis on following the linear sequence of steps.. Tkaczyk (2015) noted the "freeze" or "unfreeze" does not consider the dynamic nature and speed of change, and organizational leaders cannot operate in a static state. The "move" step of Lewin's model may be inappropriate or ineffective for leaders of large enterprises requiring lengthy timeframes for even modest shifts (Tkaczyk, 2015).

Moyce (2015) identified factors that influence change management, including a poor understanding of the current situation. Hughes (2016) outlined opportunities for new change management initiatives which involves (a) embracing and engaging with resistance to change, (b) supporting ethical decision making while acknowledging power and politics, (c) considering change processes as steps or an ongoing process, (d) encouraging organizational learning, (e) engaging with unique contexts and cultures to move away from standard formulas for success, and (f) reassessing the rubric for the evaluation of organizational change.

Munro-Smith (2018) stated that leaders using design thinking enable and empower prople to achieve the remarkable. New solutions may then lead to new challenges and require additional change (Vedenik & Leber, 2015). Vedenik and Leber (2015) stated that the recurring cycle of change should be considered by leaders as causing constant opportunities and problems.

Small Business, Organizational Development, and Evolving Markets and Competitiveness

Small Business

Small business owners constitute over 99% of companies in the U.S. market (U.S. SBA Office of Advocacy, 2018). Small business leaders employ 49.2% of the private sector workforce and are responsible for 64% of net new jobs in the United States (U.S. SBA Office of Advocacy, 2018). Small and medium enterprises are said to account for 90% of businesses globally and up to 60% of employment (Luetkenhorst, 2004). Small business leaders are challenged to meet the demands of the evolving market (Trifu & Stirbu, 2015). Small and medium enterprises are regarded as important backbones of economies around the world (United Nations, 2020).

Rahman and Ramos (2010) stated that small to medium-sized enterprise leaders lack core competencies to be fully effective in running their companies and be active innovators to grow their businesses and remain competitive. Small and medium enterprise leaders are challenged due to scarcity of resources, the complexity of the scientific field, access to information, and the ability to balance operations of the firm with new innovative activities (Abouzeedan et al., 2013). Gerlitz et al. (2016) stated that targeted strategic orientation for small enterprises allowed the development of capabilities to support innovation, learning, and strategic planning.

Ward et al. (2009) found that managers of small businesses can use design thinking as a tool for business growth and innovation. Brown (2009) stated that design thinking delivers a systematic approach to innovation and provides small technology-

driven organizations and innovative start-up entities an advantage over larger, established corporations, especially in the current research and development environment. Massaro et al. (2016) studied the literature on knowledge management practices in small businesses and identified process, strategy, culture, and innovation as key drivers. Gerlitz et al. (2016) examined how targeted strategic initiatives support small businesses, specifically in the areas of organizational behavior, business performance, and strategy. Ward et al. (2009) found that engaging management in the design process allowed small business managers with opportunities that design can be used as a tool for business growth..

Organizational Development

Heorhiadi et al. (2014) examined OD and the effort to create a humane workplace. Cummings and Cummings (2014) found that OD was vital to enhance an organization's effectiveness on human, economic, and societal fronts. Stakeholder engagement and active facilitation also helped organizational development (Marshak, 2015). Gover et al. (2016) stated that organizations should determine how to measure culture change initiatives, and that success in one area of the company may not be applied to other organizational areas.

Elsbach & Stigliani (2018) studied design thinking as a process to modify organizational culture which in turn supported attributes of collaboration, innovation focus, organizational learning, and risk-taking. Design thinking practitioners can leverage the uncertainty from evolving markets and can support innovation for products and services (Pavie & Carthy, 2015). The use of design thinking afforded practitioners the

opportunity for increased innovation, cultural change, improved customer focus, and acquiring and retaining workers (Dunne, 2018).

Bourke and Crowley (2016) examined types of organizational human resource management that were most beneficial for firm innovation. Holzle and Rhinow (2019) found design thinking was a useful training format that supported practicinglearning flexibility. Bourke and Crowley (2016) noted that organizational change has a positive effect on innovation with the most significant impact being through collaboration and outsourcing. Krohn (2015) studied the consumer marketplace and argued for the incorporation of design considerations upfront and at the beginning of the value chain. Krohn (2015) found linkages between a design and product brand and noted that the design conveys emotions and imagination. Dziadkiewicz (2017) claimed a principal and essential source of design thinking was insight. A critical source of design thinking involves watching what people do not do, and listening to what was not said (Brown, 2009). Cagnin (2018) and Snyder et al. (2018) stated that leaders might benefit from design thinking and working with storytelling and dialogue processes to engage workers to enhance communications.

Kurtmollaiev et al. (2018) examined how training leaders in design thinking can support managerial sensing, transforming capabilities, innovation output, and positively influence team operational capabilities. Kurtmollaiev et al. found that design thinking training encouraged managerial sensing, transformed capabilities, and stimulated innovation. Snyder et al. (2018) stated that roadblocks to developing value-based leadership included lack of strategy, poor clarity about leading, limited identity as a

leader, instability, reactivity, and overreliance on rules and regulations. Garbuio et al. (2018) noted design thinking provided leaders the processes and skills to identify and develop market opportunities in evolving markets.

Evolving Markets and Competitiveness

The ability to manage change is a significant concern for organizational leaders (Kumar et al., 2015). Rivero and von Feigenblatt (2016) outlined how the current "new normal" environment have impacted factors of corporate sustainability. The changing interaction among emerging economies dictates changing supply chains and evolving markets (Hong, et al., 2018). Santos-Vijande et al. (2012) stated that turbulent and unpredictable environments require organizational learning to address a firm's competitiveness and performance. Hong et al. (2018) outlined how the emerging world landscape and the changing economies are impacting competitiveness.

Cagnin (2018) utilized futures literacy process with an overlay of design thinking as a framework to evaluate the efficacy of the process to support transformative business strategy.. When leaders use a combination of strategy with workforce, a culture of innovation is created that can drive company growth, address evolving markets, and ensure business sustainment (Brown, 2009). Zheng (2018) found that design thinking was an important tool for leaders to enhance the competitiveness of the organization and to support innovation. The use of the design thinking process was found to provide opportunities to examine innovative management methods and tools to build new organizational capabilities and sustain competitiveness in tumultuous business conditions (Lockwood & Papke, 2018). Brown (2009) stated business leaders should incorporate

creative problem-solving skills into strategic initiatives and engage workers in design thinking. The use of design thinking encouraged out-of-the-box thinking and breakthrough ideas which could provide a competitive advantage to a company (Dunne, 2018).

Transition

I considered the existing literature on design thinking and outlined modes of the design thinking process and characteristics of design thinking. The body of literature was examined for the challenges and disadvantages of design thinking. I discussed specific topics and complementary frameworks that were found in the existing literature to be supported by design thinking and outlined alternative theories and frameworks. I examined topical areas related to the research question on how design thinking may help small business leaders who lack organizational development processes to address evolving market conditions and maintain competitiveness.

In Section 2, I reviewed the study purpose and addressed the role of the researcher, participants, research method and design, and population and sampling. I included ethical research, incorporating the measures to be used to ensure the protection of each study participant as human subjects and data storage requirements. Data collection methods, instruments, and techniques are found in Section 2. I included details about the data analysis, reliability, and validity of the study.

In Section 3, I restated the purpose and summary of the findings from the study. I provided the research question and identified, analyzed, and discussed findings by theme. I tied the results with other research from the literature review and linked the findings, as

appropriate, to the conceptual framework. I outlined the applications to effective professional practice, implications for social change, and recommendations for useful action and future research. I reflected on my experiences and discussed biases or preconceived ideas or values and the effect of those biases or values on the participants or partner organization. I completed Section 3 with a concluding statement.

Section 2: The Project

Purpose Statement

The purpose of this qualitative single case study was to explore organizational development processes small businesses use to address evolving market conditions and maintain competitiveness. The specific population for this study was the 10-person executive management team of a small business located in the Honolulu business district, state of Hawaii. This identified enterprise was appropriate for the study as leadership survived the changing environment for high technology Congressionally earmarked research and development funding in 2011. The implications for positive social change include benefitting underserved and disadvantaged families and youth through a better understanding of stakeholder priorities, which could result in increased opportunities to secure funding and provide targeted services for community betterment.

Role of the Researcher

For this qualitative single case study, I was the primary data collection instrument in the research process. Rudestam and Newton (2015) stated that qualitative researchers use interviews for data collection. I conducted semistructured interviews through video conferences. I also performed internal organization document reviews by video conference to gather the requisite data for this study. Thomas (2015) stated that semistructured interviews provide the researcher freedom to follow up on points as necessary in small scale research. Interview questions are tools that allow the researcher to draw out participant reflections of their experiences and life implications (Rudestam & Newton, 2015). I invited participants to voluntarily engage in the study.

I was familiar with the study organization through prior work as a federally funded program reviewer and as an independent contractor with the partner organization as an intermediary with the state of Hawaii, Department of Education. I was the technical director of a Navy-sponsored program that provided funding and project oversight to companies in areas of interest to the Department of Defense and the Department of the Navy. My partner organization was one of many applicants to the Navy-sponsored program for funding, and several projects were completed. The projects involved developing professional development credit courses for teachers and did not involve engagement with the executive leadership team or contact with the functional departments. The chief operating officer provided a Letter of Cooperation, and all participants completed consent forms as required by Walden University. I complied with all the requirements, as noted in the *Belmont Report* protocol, and I satisfied all Institutional Review Board (IRB) requirements.

The National Commission developed the *Belmont Report* for the Protection of Human Subjects of Biomedical and Behavioral Research, which was published in the Federal Register (U.S. Department of Health, Education, and Welfare, 1979). The *Belmont Report* is the principal document of the current system for the protection of human subjects and outlined three ethical principles: (a) respect for persons honoring the requirements for consent, (b) beneficence supporting risk and benefit assessments, and (c) justice recognizing moral requirements for fair procedures and outcomes for participant selection. I used the *Belmont Report* as a guide for ethical research practices, to identify the nature and definition of informed consent, to determine the researcher's

role related to ethics, and to understand respect for persons. I ensured that all participants agreed with and signed a consent form, followed interview protocol fairly and ethically, respected individual privacy, and ensured confidentiality before, during, and after interviews.

The Walden University IRB is charged with ensuring that each researcher adheres to the ethical standards of the university and federal regulations of the United States. Before any research, the researcher is required to obtain IRB approval. I was responsible for meeting all criteria outlined in Walden University's IRB approval.

Specific responsibilities of the researcher include ensuring that all participants in the study sign a consent form as a condition for voluntary participation in the study. I treated each participant ethically and in concert with Walden University's IRB requirements, which includes guidelines for the use of data sources and tools. I provided participants the choice of either a face-to-face or video conference interviews to give the most comfortable environment for participants. Interviews were conducted by video conference and were the primary method for collecting data. I used the FreeConferenceCall.com system as it is a free system and accessible by mobile phone or computer. I used FreeConferenceCall.com to record the interviews. Interviews are a potentially appropriate method for data collection (Percy et al., 2015). Brayda and Boyce (2014) stated that interviews provide useful information and result in rich narrative details when interviewers put the participant at ease.

An interview protocol was used for data collection purposes. An interview protocol supports the establishment of a dialogue with each participant to confirm data

saturation and is used to help mitigate bias (Yin, 2014). I developed interview questions to ensure consistency between interviews. I recorded and transcribed the interviews and compared the transcriptions with the researcher notes of the interviews. I used interview notes and transcriptions to evaluate the data, develop results, memorialize data, and consider any areas where I may have injected bias. I mitigated bias and avoided viewing data through a personal perspective by following the interview protocol and supported an open mind in considering the information provided by participants. To ensure the integrity of participant responses, I used member checking with all participants, validating my interpretations from their respective interviews. The use of a case study protocol guided the interview process and ensured consistency among interviews, which mitigated bias and supported data saturation.

Participants

The selection of participants is essential to ensure that the characteristics of each participant are aligned with the research question (DeJonckheere& Vaughn., 2019). Selecting participants who are involved with particular topics is valuable (Forte et al., 2009). I considered entities for the study and identified that the chief operating officer of the organization would be able to address the research question.

Participants were from a small business setting in a technological and government contracting organization identified to be using design thinking in the organization, which had required organizational adaptations to address changes due to a reduction in federal and local funding. The specific population for the study included members of the 10-person executive management team (chief executive officer, chief operating officer, chief

administrative officer, human resources manager, department managers, and other key contributors). The executive management team was selected for this study as these individuals were most familiar with actions related to organizational development and addressing change.

I emailed the chief operating officer for approval to conduct the study and requested and received a formal letter of cooperation. Upon receipt of final IRB approval, I notified the chief operating officer by email. The chief operating officer sent an email to the executive management team and invited those interested in participating in the study to respond directly to me.

Upon receipt of responses from prospective participants, I emailed the informed consent form, which included the purpose of the study, participation requirements, potential risks and benefits, and the right to withdraw at any time without penalty. All participants were required to provide written consent to participate in the study through the consent form. Participants were offered to meet at a neutral location for a face-to-face interview or video conference to provide a safe and comfortable atmosphere and to build a working relationship between the researcher and the participant. The participants were requested to review and comment on a summary of the findings from the interview to reinforce the trust developed between me and them.

I used strategies to establish a working relationship with participants. These strategies included (a) accommodating participant interview location and interview time preferences, (b) offering food and drink to establish a comfortable environment, (c) initiating small talk and demonstrating openness and warmth, (d) being clear with

questions and patiently waiting for responses, (e) being focused on the respondent and maintaining appropriate eye contact, (f) being transparent about the purpose of the study and next steps, and (g) responding openly and honestly about any questions the interviewee poses to the researcher. By practicing strategies to develop a working relationship with participants, I secured rich and in-depth data from the interviews.

Research Method and Design

Research Method

The qualitative research method was used to explore the processes small businesses may apply for implementing organizational development and addressing change for evolving market conditions. The qualitative research method was used to gather information and explanations about personal and individual experiences (Austin & Sutton, 2014). The qualitative research method is different from the quantitative research method because qualitative methods focus on numerical data and measurable variables while qualitative methods use observation and interpretation (Park & Park, 2016). Austin and Sutton (2014) stated that the voice of the participant is missing from quantitative research. Park and Park (2016) concluded that quantitative researchers focus on justification of facts or theory, while qualitative researchers support discovery. The qualitative research method provides the opportunity for researchers to develop a rich and deep understanding of a phenomenon (Austin & Sutton, 2014).

The research question matched the research strategy). The qualitative method was selected for the study to gather information and understand the experiences of the participants. Interviews provide the opportunity for a researcher to explore and document

the experiences of a population, analyze the data, and provide recommendations for future researchers (Marshall & Rossman, 2015). I desired to capture the voice of the participants, and the quantitative method was not appropriate for this process. The qualitative method permitted me to gain a deeper, holistic understanding of the research phenomenon in the naturally occurring situation. The quantitative method and mixed methods were not appropriate for the study as I did not collect numerical data, validate any hypotheses, or justify facts or theory.

Research Design

Qualitative research method designs include phenomenology, ethnography, and case study (Austin & Sutton, 2014; Park & Park, 2016). I used a case study. Case study design should be used when exploring a situation to generate insights from interviews conducted in real-life settings (Runfola et al., 2017; Yin, 2014). I explored the processes small businesses may use for implementing organizational development and addressing change for evolving market conditions.

The use of a case study design may assist the researcher in identifying connections among activities or events over time (Yin, 2014). Yin (2014) stated a case study should include (a) background information, (b) the primary issue investigated, (c) data collection procedures, and (d) interview questions. By using interviews, I uncovered information from the participants to determine processes utilized for organizational development and for addressing change. Data from the interviews allowed me to discover the benefits of any strategies used or the need for alternative approaches. I identified themes from the information gathered from the study population using interviews and

reviewing internal organization documents dealing with organizational change, professional development opportunities, corporate culture, personnel evaluation criterion, and other topics uncovered during the interview process.

Other qualitative research designs are phenomenological and ethnography (Percy et al., 2015). Researchers use phenomenological research design to understand how humans experience the world (Austin & Sutton, 2014). Researchers use ethnographical research design to explore participants in real-life settings and is focused on culture and the interaction of people (Austin & Sutton, 2014; Park & Park, 2016). I selected the case study research design to explore the organizational development processes small businesses use to address evolving market conditions and maintain competitiveness. The phenomenological research design was not appropriate for the study as I did not explore the lived experiences of participants. The ethnographical research design was not suitable for the study as I did not seek to uncover issues or share experiences of a culture.

In qualitative studies, the use of an appropriate sample size is important to ensure representation of the population (Park & Park, 2016). DeJonckheere and Vaughn. (2019) stated that large samples are not the goal of qualitative studies, and a purposeful sample is used for in-depth understanding. The executive leadership team of the partner organization was selected to study processes used for organizational development and to address change. All members of the executive management team who completed the consent form were interviewed until data saturation was achieved. Data saturation may be considered when researchers do not identify any new codes, themes, or insights from participant responses (Lincoln & Guba, 1985). I considered data saturation when I did not

identify any new codes, themes, or insights from subsequent participant responses and document reviews.

Population and Sampling

Researchers using the case study design are provided an opportunity for an empirical investigation of deep, real-world analysis of a phenomenon (Yin, 2014). The study involved a small business located in Honolulu, Hawaii. The population was the executive management team and those in leadership roles who have responsibility for organizational strategy, operational decision-making, and policies and procedures. A purposive sample was justified to address the research question (DeJonckheere & Vaughn., 2019). I used a purposive sample consisting of the ten-person executive leadership team of the partner organization. Yin (2014) defined purposive sampling as the anticipated richness and relevance of the information to be collected related to the research question. Sim et al. (2018) stated that a rule of thumb sample size for single case studies was four to 30. Lincoln and Guba (1985) proposed that the determination of sufficient sample size was made when saturation was achieved. Interviews of the executive leadership team members who completed the consent form continued until data saturation was achieved through the review of data from interviews and document reviews. Researchers use data saturation in case study research for the attainment of comprehensive knowledge about a studied phenomenon (Marshall et al., 2013). Data saturation may be achieved when no new information is found from interviews and document reviews (DeJonckheere & Vaughn, 2019; Marshall et al., 2013).

I worked with the chief operating officer to gain an introduction to the executive management team as prospective participants for the study. The chief operating officer sent an email of invitation to participate in the study, and those interested were requested to contact the researcher directly by email, phone, or text. All prospective participants were required to provide written authorization through a consent form to be sent to each potential participant by me via email. Participants were interviewed by video conference. Interviews were conducted for 20 to 30 minutes, and 15 to 30 minutes were allotted for video conference review of pertinent documents. Physical copies of relevant documents were not available from participants due to the current pandemic-related health restrictions. No interviewee declined to provide related documents. Video conferences, text, and email communications were used to obtain data. The interview process continued until no new information was found, and data saturation was achieved.

All members of the executive management team who expressed interest and completed the consent form were interviewed until data saturation was achieved. Methodological triangulation was used to validate data received and to confirm data saturation. Methodological triangulation was used to validate the consistency of findings from the use of multiple data collection methods such as interviews, observations, archival data, and documents (Guion et al, 2007). Triangulation involves soliciting data from different, multiple sources to cross-check and corroborate evidence and clarify or identify a theme or theory (Rudestam & Newton, 2015). The use of triangulation enhances the results of a study and data saturation (Fusch & Ness, 2015; Guion et al., 2007).

Ethical Research

Ethical standards have been adopted by leaders of government agencies, universities, and professional associations to ensure the protection of human rights during research studies (Yin, 2014). Barker (2013) and Bolderston (2012) stated protocols that guide research ethics include minimizing the risk of harm, obtaining informed consent, protecting anonymity and confidentiality, avoiding deceptive practices, and providing the right to withdraw. I identified optional locations to provide for the safety and comfort of participants. All participants chose to be interviewed by video conference, and I obtained informed consent from the study participants through the consent agreement. All identities of the participants were kept confidential using common identifiers that did not use the participant's name, organization, or other identifying characteristics in data analysis. Yin (2014) stated that researchers should protect the identities and rights of participants in research. The identities of all participants and organization names were kept confidential as all notes and interview transcriptions were given a unique identifier. I was transparent to all participants on the purpose of the study and shared my interpretations of responses from the interview for validation. The procedures for voluntary withdrawal from the study involved the participant informing me in person or handwritten or e-mail notice of the desire of the participant to withdraw from the study for any reason. No participant withdrew from the study. Participants who completed the interview received a $10 gift card.

Frechtling and Boo (2012) emphasized the importance of professional codes of conduct to help researchers maintain ethics during research. The World Association for

Public Opinion Research (WAPOR) Code of Professional Ethics and Practices includes statements in five thematic areas (Frechtling & Boo, 2012), which are the rules of practice between researchers and sponsor/clients, rules of practice between researchers and respondents, and the rules of practice between researchers (WAPOR, 2019). Without standards of conduct, the evaluation and support of ethical research might be inconsistent. Specific statements in the WAPOR Code of Ethics applicable to this research include (a) conducting the study as accurately as permitted by the available resources and techniques, (b) adhering to approved protocols for the study, (c) maintaining the confidentiality of information and materials, and (d) protecting the identities of participants. I used the WAPOR codes to guide my conduct for the study and to adhere to the approved Walden University IRB protocols for the study while conducting the study as accurately as possible and maintain confidentiality of personal information, identities, and shared information from the interviews.

To ensure data security, I secured all data on a password-protected flash drive in a secure location in my home office. All data will be stored for 5-years and destroyed after that time by permanent electronic deletion by reformatting the flash drive. All personal information, identities, and interview outputs are protected through locked file boxes and password protection. Paper data are stored in a password protected locked file boxes and will be destroyed by crosscut shredding. I did not disclose any personal information or identifying details during and will not disclose any personal information or identifying details after the study in accordance with Walden University code of conduct and the IRB approval. The IRB approval number for this study is 03-06-20-0666250.

Data Collection Instruments

I served as the primary data collection instrument using two data collection methods: semistructured interviews and internal organization document reviews. I conducted semistructured interviews with participants from the executive management team of a small business in Honolulu, Hawaii. Interviews were used to collect information from study participants. Interviews may be used to achieve data saturation (Fusch & Ness, 2015). Austin and Sutton (2014) noted that interviews should continue until no new information is received. I developed five interview questions related to the research question to ask each study participant. The use of interview protocols provides researchers the opportunity to gather rich, meaningful data (Castillo-Montoya, 2016).

Interview notes were taken on a personal computer in Microsoft Word to increase reliability and validity and mitigate bias. The notes were reviewed after each interview and compared with the interview transcription. I used member checking to validate the data collected from interviews. Member checking is a technique used to establish credibility by establishing the accuracy and honesty of a study's findings and accomplished by participant validation of the researcher's interpretation of participant responses to the interview responses (Lincoln & Guba, 1985). The use of a recording device helps memorialize the interview (Austin & Sutton, 2014). Interviews were recorded with a mobile phone and notes of the interview question responses complied with a personal computer using Microsoft Word to provide a secondary detail of the information collected. The interview transcription was compared with the interview notes

to reduce errors in the data collected to ensure there were no glaring misrepresentations of information.

Fusch and Ness (2015) found that rich and think data received from participants enhanced the data for analysis and helped achieve data saturation. The collection of participant life experiences helps researchers with valuable insights that support relevant and suitable data (Austin & Sutton, 2014). I carefully considered the essence of the words used by participants in interviews. I used triangulation of internal organization documents to review interview notes and validate the information from the interviews. Member checking and triangulation helped support trustworthiness and validity (Birt et al., 2016).

Data Collection Technique

In this qualitative, single case study, I used semistructured interviews to explore the organizational development processes small business leaders use to address evolving market conditions and maintain competitiveness. Semistructured interviews provided an opportunity for researchers to gather first-hand knowledge from an interviewee through open-ended data (DeJonckheere & Vaughn, 2019). I met with the participants at the scheduled time and location through video conferencing. I provided the background for the study and verified that the participant wanted to continue participating in the study. I asked the participant for permission to record the interview. All participants agreed to be recorded. Upon completion of the interview, I thanked the participant, reconfirmed the participant's interest in continuing participation, and scheduled a follow-up member checking appointment to share my interpretation of the participant's responses to the interview questions. Semi-structured interviews provide the opportunity to for a

researcher to gather personal experiences, attitudes, beliefs, and feelings, and personal issues that may require follow-up questions to gain better understanding (DeJonckheere & Vaughn, 2019). The advantage of face-to-face interviews is the ability of the interviewermonitor social cues and receive spontaneous responses (Opdenakker, 2006). The disadvantage of using face-to-face interviews as a data collection technique is the investment of cost and time (Opdenakker, 2006). The use of video conferencing allowed participants to be in a comfortable environment that was secure and safe..

In addition to interviews, participants provided internal documents such as announcements, meeting notes, policy and procedure change reports, changes to compensation programs, and employee professional development incentives to support organizational development and change initiatives. Researchers use documents to provide unique and explicit knowledge to enhance the credibility of the research (Siegner et al., 2018). By using triangulation, I verified data shared during the interviews.

Interviews were found by scholars to be the primary source of data for qualitative studies which yielded relevant data (Yin, 2014). The use of interviews allowed me to understand the processes used for organizational development to address change. Reliability and validity were supported by a review of internal organization documents, which provided additional data and context. Triangulation of all information acquired enhanced the validity of data. Member checking was accomplished through sharing my interpretation of participant responses to the interview questions for validation by the respective participant.

Data Organization Techniques

The safeguarding of participant-provided data is the responsibility of the researcher (Percy et al., 2015). I organized the data collected in the forms of interview recordings, interview transcriptions, and interview notes in a separate, secure electronic data folder with unique file names to ensure security. Hard copy documents were secured in a key-locked file box. The paper copies of the interview transcriptions and notes were destroyed by shredding systems for keeping track of data, emerging understanding such as research logs, reflective journals, and cataloging/labeling systems.

I used unique file names to identify participants. Coding is essential for data collection, analysis, theme identification, and interpretation (Saldana, 2016). Microsoft Excel software was used to organize, analyze, and identify insights from the data. The Excel spreadsheet was saved on a password-protected flash drive and was password protected. Microsoft Excel was used by researchers to collect and prepare data for analysis (Elliott et al., 2006).

I secured raw data and files used to analyze the data on a password-protected, newly formatted flash drive in a fireproof safe at a secured location in my home office. Each file was password protected with participant and interview data kept confidential through coding and, as appropriate, redacted. All data will be stored for a 5-year timeframe and destroyed by permanent electronic deletion through the reformatting of the flash drive.

Data Analysis

Triangulation was promoted by Jack and Raturi (2006) for use in case studies. Guion et al. (2007) suggested using methodological triangulation to validate the consistency of findings from the use of multiple data collection methods such as interviews, observations, archival data, and documents. I used interviews and document reviews to conduct methodological triangulation. Guion et al. (2007) stated that triangulation increases confidence in research data and provides a clearer understanding of the phenomenon. I processed data for codes and developed themes by using the interview notes and reviews of the recordings of each interview.

Yin (2011) outlined a five-phased cycle for analysis involving (1) compiling, (2) disassembling, (3) reassembling, (4) interpreting, and (5) concluding. I followed the process of assembling the data gathered in the collection process in an orderly manner and disassembling or breaking down the data into smaller pieces. The data was reassembled by grouping the broken-down data through possible themes. The reassembled grouped data were used to interpret the data. I repeated the process to gain further insight from the data. From the interpreted data, I was able to draw conclusions from the information.

The identification of themes and codes for data analysis and understanding was essential to the data analysis process (Saldana, 2016). I used in vivo coding to code transcripts from participant interviews. In vivo coding emphasizes the spoken word of participants and uses a word or short phrase from the data such as an interview transcript

(Manning, 2017). Themes from the coding process were identified and documented using a Microsoft Excel spreadsheet.

The participant identifiers were demarcated as the rows of the spreadsheet (Y-axis) with coding from the interviews in the column (X-axis). Themes were identified, defined, and named through the coding process continues. To understand the coding data better and support theme analysis, mind maps were developed as appropriate. Mind maps are graphical or visual representations of topics, subtopics, and related themes (Kernan et al., 2018). Key themes were correlated with the results of the literature review, analysis of participant data, and the conceptual framework.

Coding, categorization, and theme analysis were crucial in evaluating data, concepts, and experiences to provide valuable understanding for interpretation (Saldana, 2016). By conducting data analysis, key themes were compared with the conceptual framework and the results of new research conducted by other researchers. I reviewed the current body of literature to validate the alignment with the conceptual framework.

Reliability and Validity

Reliability

The reliability of a study can be supported by the soundness of a study (Noble & Smith, 2015). Noble and Smith (2015) explained that researchers use consistent analytical practices to address biases so others may replicate the study and achieve consistent results. I built the evaluation of data throughout the study to ensure that the information presented aligned and supported the data collected. The processes for the

study have been documented to support dependability so that subsequent researchers may repeat the research.

Member checking can be used to validate the information resulting from the interview process (Harvey, 2015; Lincoln & Guba, 1985). Member checking was used to confirm my interpretation of the participant responses to the interview questions. Participants were requested to review my documentation of their respective interviews immediately after I completed the transcription and interpretation of the interview data. The review of internal organizational documents was used to validate data from the interviews and support triangulation.

Lincoln and Guba (1985) stated that a dependable study should be accurate, have consistency of data and findings, and be repeatable. To enhance dependability, I took detailed handwritten notes on the manner of data gathering, analysis, and interpretation of the data. I used recoding and triangulation to improve the dependability of the data and findings. An inquiry audit may be engaged by the researcher to support the study's dependability (Lincoln & Guba, 1985).

Validity

Validity refers to the credibility, transferability, and confirmability of findings (Noble & Smith, 2015). The researcher’s confidence in the truthfulness of the study findings lends to credibility (Lincoln & Guba, 1985; Yin, 2014). I used member checking and methodological triangulation to enhance the credibility of the study.

Transferability refers to the possibility of findings or results that may be applied to a different or broader population (Lincoln & Guba, 1985; Yin, 2014). I provided a full

description of the case study and participant data to show that the study findings may be applicable to other contexts, circumstances, and situations (Yin, 2014). Readers and future researchers may use the information provided by me to consider transferability. Confirmability is reached when consistency and applicability have been addressed and refers to the level of confidence that the findings of a study that could be confirmed or corroborated by others rather than from researcher biases or motivations (Noble & Smith, 2015). Carcary (2020) stated that an audit trail can be show the trustworthiness and transparency of the study by detailing each step of the study and the researcher's thoughts and insights. I used member checking and an audit trail to confirm the validity of participant data.

Fusch and Ness (2015) noted that data saturation was critical in qualitative research and occurred when no additional data and themes were available. I collected detailed information from all participants until data saturation was achieved. Probing questions were asked during the interviews, documents were reviewed, and data were analyzed. The member checking approach was used to minimize bias and help ensure that I accurately presented the perspectives of participants.

Transition and Summary

In Section 2, I reviewed the study purpose and addressed the role of the researcher, participants, research method and design, and population and sampling. I have included ethical research, including measures used to ensure the protection of each study participant as human subjects and data storage requirements. Data collection methods,

instruments, and techniques were included in Section 2. I included details about the data analysis, reliability, and validity of the study.

I conducted interviews and document reviews with a ten-person executive management team of a small business located in the Honolulu business district, state of Hawaii. Members of the population who indicated interest and provided a fully executed consent form were interviewed. I conducted interviews with each participant to reach data saturation. Electronic data files of the information collected were created and secured and used to organize the required information. Data were collected and analyzed, from which themes were developed.

In Section 3, I restated the study purpose and summary of the findings from the study. I provided the research question and identified, analyzed, and discussed the findings from the study by theme. I compared the results with other research from the literature review and linked the findings, as appropriate, to the conceptual framework. I outlined the applications to effective professional practice, implications for social change, and recommendations for useful action and future research. I reflected on my experience and discussed possible biases or preconceived ideas or values and the effect of those biases or values on the participants or partner organization. Lastly, I completed Section 3 with a concluding statement.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative single case study was to explore organizational development processes small businesses use to address evolving market conditions and maintain competitiveness. Small business leaders are especially challenged to meet market demands while balancing limited financial and human resources to maintain competitiveness (Cohen et al., 2014). In order for business leaders to adapt and survive in a dynamic business environment, leaders should consider employing organizational development processes to facilitate organizational change (Dickens, 2015). This study included five members of a 10-person executive management team from one organization in Hawaii. I selected semistructured interviews and document reviews as data sources. I reviewed internal documents such as meeting minutes, meeting notes, and training flyers to support statements made by participants during the interviews and followed up with participants to ensure the accuracy of my interpretation of the interviews for methodological triangulation. I reached data saturation when no new information surfaced from the interviews.

I analyzed participant data to provide insight into the organizational executive management team's use of processes to achieve strategic objectives to meet changing conditions in the marketplace and to maintain competitiveness. The three themes that emerged from the study were (a) becoming a learning organization, (b) becoming a problem seeking and identifying organization, and (c) becoming a user-focused, market-driven organization. Becoming a learning organization aligned to attributes from the use

of design thinking. Becoming a problem seeking and identifying organization developed as the organization moved from addressing client specified issues to seeking and identifying core problems and aligned with the use of design thinking for problem identification. Becoming a user-focused, market-driven organization emerged from the organization's corporate codevelopment process, which engaged clients and customers as partners in the commercialization and product development process and aligned with the first mode of the design thinking process for empathy building. The design thinking process was found to be most effective in support of the organization's transition from a research and development focus to a user-focused, market-driven commercialization enterprise.

Presentation of the Findings

Research Question: What organizational development processes do small business leaders use to address evolving market conditions and maintain competitiveness?

Theme 1: Becoming a Learning Organization

Evidence from the Literature

Santos-Vijande et al. (2012) stated that turbulent and unpredictable environments require organizational learning to address a firm's competitiveness and performance. In addition, Ahern et al. (2015) examined nonlinear, complex projects such as organizational learning and knowledge creation over project lifecycles and concluded that complex project capabilities paralleled organization learning consistent with strategy, organizational development and change management models. Furthermore, O'Reilly and Tushman (2011) examined how organizational leaders implemented exploration and

exploitation to allow companies to appreciate how strategic leadership supported adaptation of organizational skills and resources for environmental change.

Evidence from the Conceptual Framework

Beckman and Barry (2007) stated that the design thinking process supports learning. Moreover, Elsbach and Stigliani (2018) found that the use of design thinking in organizations helps create an experiential learning process that addresses the development of user-centric-focused organizational cultures. Similarly, Holzle and Rhinow (2019) claimed that the design thinking process is a valid training format and supports practicing learning flexibility. Along those same lines, Matthews and Wrigley (2017) emphasized the importance of creating accelerated learning through hands-on experimentation by failing quickly and often. Liedtke et al. (2017) also stated that training that combines classroom instruction with real hands-on experience supports the building of a learning community.

Data Collected

Participants expressed that by engaging customers and using experimentation, iteration, prototyping, and wayfinding, the company can become a learning organization. Participant 1 (P1) said, “We are focused on learning quickly and willing to fail.” P2 and P3 both noted that the organization is required to be at the edge of technology and should demonstrate flexibility and adaptability. P4 commented that the organization should be agile and nimble to adapt to the needs of the industry. P2 said, “Many tasks cannot be clearly described, so it takes flexibility, experimentation, prototyping, fitting together puzzle pieces, and trial and error.” P4 supported P2’s assertion by saying, “We need to

gauge, assess, adapt, and move forward." For example, P1 and P2 provided organizational training documentation, and P3 stated, "Design thinking was taught as a core process to enable staff better to understand the point of views of customers and stakeholders." P2 noted, "The objective of the training session was to change mindsets and ways to do things." My interpretation of the documents provided was that the training session was genuine, and the organizational leaders were committed to strategically using the design thinking process. P1 said, "The organization has adopted the design thinking process to encourage the process of learning and where iteration is acceptable." P1 also provided an example of how the process was used for redesigning the organization's office and kitchen area; stakeholders were engaged to provide input and participate in the design of the new space. P2 said, "The key is for the organization personnel to constantly reinvent themselves to be innovative and develop more internal capabilities." P1 mentioned how the organization is now tolerant of experimentation, iteration, and accepting of failure. P1 explained, "Design thinking brings a process by which the process of iteration is more acceptable and encourages the process of learning." In response to the question concerning additional information about the organizational leaders' need to address evolving market conditions and maintain competitiveness, P5 concluded, "The organization needs to live at the mercy of our wits as things move very quickly. It never relents, and we have to be competitive, or we die."

Theme 2: Becoming a Problem Seeking and Identifying Organization

Evidence from the Literature

Problem seeking and identification are found to be the foundation for the development of relevant solutions to meet core issues (Abdulla et al., 2020; Rubenstein et al., 2020). Bjorklund et al. (2020) stated that design can be used to redefine problems, facilitate stakeholder codevelopment, and learn through experimentation. Furthermore, Arreola and Reiter-Palmon (2016) stated that problem identification and definition of the parameters to be solved have a positive influence on the creativity of possible solutions. Moreover, Rubenstein et al. (2020) stated that some individuals might be natural problem finders and problem identifiers, but others need support to develop the required skills.

Evidence from the Conceptual Framework

Lockwood and Papke (2018) identified design thinking as a process for problem finding and problem-solving. Pitsis et al. (2020) stated that design thinking should be embedded and customized to the organizational culture and that strategic incorporation of design thinking in an organization supports dealing with wicked problems in a highly competitive and global market. Wyrwicka and Chuda (2019) described the practice of design thinking as activities involving understanding needs and problems, insight formation, rapid learning, creating, testing, and feedback The design thinking process is based on cyclical five steps, and practitioners depend heavily on input and feedback from the user (Armstrong & Johnson, 2019). Bjorklund et al. (2020) found that the key principles of framing and reframing, problem seeking, visualizing, experimenting, prototyping, and a deep understanding of user issues are core requirements for building

deep and extensive design capabilities. Clegorne and Mastrogiovanni (2015) outlined how a new paradigm was needed to address "wicked problems," or problems that are extremely difficult or thought to be impossible to solve due to incomplete, contradictory, and changing requirements to include the interconnection of the problem with other problems. Design thinking is adaptable and provides a process to address wicked problems and managing change in organizations (Greenwood et al., 2019). The design thinking process supports a distinctive, logical approach for problem identification and formulation (Weedon, 2019).

Data Collected

In responding to a question concerning barriers to implementing processes, P5 said, "Understanding the true problem that needs to be solved and understanding the organization to match the solution which may not be the best product or technology." P1 responded to the same question by speaking about the organization's culture with engineers, researchers, and scientists and how changing the culture to become focused on product development and understanding was a challenge. When responding about organizational development processes, P1 said, "Everything is driven by needs and gaps." P3 said that there is an ongoing need "for assessment, evaluation, and identification of market signals." P2 noted that "customers often do not know what they need, and the process allows for going beyond the technical specifications of the project and attack the core problem the customer requires." P4 explained, "The requirements are discovered through a corporate codevelopment approach which brings customers as partners which help with market requirements and problem-solving." P4 stated, "This allows the

organization to gauge, assess, adapt, and move forward." When requested to provide documentation supporting how clients and stakeholders were engaged, all participants, except P5, contributed minutes and notes of project development meetings where customers and stakeholders were present and involved in problem finding and solution brainstorming. My interpretation of the various meeting notes that indicated the participation of external stakeholders and customers is that the notes validated the claims of the participants concerning the engagement of external parties in the codevelopment process. P1 noted, "With the new process of adaptability, the organization can look at other possible applications to meet identified problems." P4 affirmed, "The corporate codevelopment involves looking for customers but is a codevelopment of solutions." P1 provided an example of a foreign cosmetics company that had a product, and when introduced to and in cooperation with the company, a problem was identified with the new product for which the organization could provide a solution. I found this example interesting as the process was different from the product development process described by other participants. P1 stated that the case was indicative of problem seeking and identification, and "technology solution matching."

Theme 3: Becoming a User-Focused, Market-Driven Organization

Evidence from the Literature

Reis (2010) stated that the adaptation of processes to address evolving requirements is essential for continuous improvement. Likewise, Swanson (2015) noted that when problems are examined from the end-user perspectives, there are new solutions to problems because designers consider the customer's point of view. Additionally,

Cravens and Shipp (1991) emphasized the importance of understanding customers, understanding what drives customer satisfaction and needs, and target appropriate markets. Furthermore, Cravens et al. (2000) affirmed the importance of considering differences in customer needs and preferences and developing internal and external collaborative relationships.

Evidence from the Conceptual Framework

The use of design thinking may provide valuable skills which enhances creativity, critical thinking, innovation, and audience awareness (Chesley et al., 2018). The development of a deep understanding of the customer or user experience through empathy is a fundamental tenet of design thinking (Lockwood & Papke, 2018). Liedtka (2020) found certain attributes were indicated in the practice and impact of design thinking, including the understanding of user needs and context for those needs, the inclusion of varying perspectives, generation of multiple prototypes, problem seeking, and conducive infrastructure of processes and mindsets. Aguinis et al. (2020) stated that a desirable future includes considering and aligning internal and external stakeholder interests through active leadership. Knight et al. (2020) found that a shift between individual and collectively developed practices to move beyond understanding customers to an approach that influences the strategic outcomes of organizations. A key aspect of design thinking is the ability of practitioners to consider aspects of human needs, technical feasibility, and business viability, which provided the ability to deliver values to stakeholders (Wrigley et al., 2020). Knight et al. (2020) stated leaders who apply design thinking should appreciate the differing modes of engagement to open up strategies to

view the market in novel ways. The existing literature provided several versions of design thinking, one being the management of factors to influence perception, engagement, and behavior provided a significant understanding of user needs and higher degrees of innovation (Thompson & Schonthal, 2020). O'Reilly and Tushman (2011) examined how strategic leadership supported adaptation of organizational skills and resources for environmental change.. Bjorklund et al. (2020) explained that the critical principles of framing and reframing, problem seeking, visualizing, experimenting, prototyping, and gaining deep understanding of user issues are core requirements for building deep and wide design capabilities. Liedtka (2020) noted certain attributes that indicated the practice and impact of design thinking, including the understanding of user needs and context for those needs, the inclusion of varying perspectives, generation of multiple prototypes, problem seeking, and conducive infrastructure of processes and mindsets.

Data Collected

P3 stated, "Design thinking helps because it's not a presumption and is an exploration of situational awareness." P1 said, "Technical details are easily met, but no one will use it (the product), so when the human aspects are addressed, the customer is pleased." P2 said, "It was important that user-centric methodologies were accepted by the company which requires huge shifts in mindsets and ways to do things." P2 emphasized how most of the organization's employees are trained in design thinking and explained that the training was an essential component in support of acceptance through internal training. P1 and P2 provided documents in support of the internal training on design thinking to emphasize the organizational leaders' desire to be user-focused and market-

driven. I found the training documents supportive of the stated objectives to be user-focused and market-driven. When asked how this was put into practice, P1, "External parties are engaged to be part of brainstorming and codevelopment." P1 also provided journey maps and storyboards which I found indicated the leaders' commitment to consider input from customers and stakeholders. P1 said, "You probably will not find organizations using journey maps and storyboards." P3 noted, "Informational awareness is used through the sharing of information to drive awareness for assessment, evaluation, and the identification of market signals.". P3 provided examples of intracompany information sharing. While my interpretation of information sharing for casual reading was a usual practice, I found the use of such information for brainstorming and engagement of customers for in-depth discussions unusual. P5 said, "The organization's business model starts with technology solutions, and the issue is that the solutions do not match with what the market requires." P5 responded to the question about barriers by saying, "The challenge is figuring out what the market requires, so we talk with people, clients and customers at different layers, reading, examining competitors, studying industry leaders." P4 said, "There is a need to focus on core capabilities and build on the capabilities to meet market requirements with acquired expertise." P4 provided examples of how core capabilities were leveraged by understanding market requirements to support the needs of companies in the oil and gas industry.

Findings and the Conceptual Framework

The findings of the study are consistent with the attributes of the underlying conceptual framework. All participants emphasized the importance of design thinking to

instill the foundational process, skills, and mindsets which contributed to the study findings. Gracio and Rijo (2017) validated the critical components of design thinking which support multidisciplinary teams and collaboration for innovation. While participants did not specifically address innovation in their responses during the interviews, their comments were consistent with innovation and constraints considered for innovation.

Applications to Professional Practice

The study findings may be of value to business leaders seeking development processes to enhance organizational learning to address the evolving business environment and maintain competitiveness with the design thinking framework. Liedtka (2015) stated there are several versions of design thinking in practice, using different terminologies, but the various versions provide a shared view of the design thinking process The participants in the study indicated that the use of design thinking was a foundational process for understanding market requirements and customer needs and to discover the core problems to be solved. The ability to focus on the core problem led to creativity and innovation which differentiated the organization from competitors and has resulted in the organization's movement from a research and development focus toward commercialization. The results of the study may contribute processes for leaders of small business development and encourage managers to explore and assess market conditions to maintain business competitiveness and profitability. Dey (2017) stated that corporate leaders should strategically adapt to survive changes in the business environment. Feher and Varga (2019) claimed design thinking supported the discovery of valuable customer

information to support strategic decisions to enhance the user experience. Bjorklund et al. (2020) listed key concerns that should be considered for successful integration of design thinking in organizations, which included ineffective cross-functional collaborations; underestimation of scope, timing, and resources required; the lack of a shared framework; and organizational understanding of the process of design thinking.

Implications for Social Change

This study may contribute to positive social change by supporting business processes for small business leaders, which may result in increased profits and more jobs for students, seniors, and mentally and physically challenged individuals. Pitsis et al. (2020) stated that design thinking is a core capability and mindset for individuals and organizations including government, public sector, and nonprofit organizations. The implication for positive social change includes benefitting underserved and disadvantaged individuals, families, and youth through more job opportunities. Increased business profits and taxes may translate to increased government and private funding and targeted services for community betterment.

Recommendations for Action

Business leaders might consider utilizing the design thinking process to support organizational learning and culture change for organizational development. The study has reinforced academic and professional literature of the key results from the use of design thinking by organizational leaders. Business leaders can consider design thinking to gain insights into the organization's culture and into the constraints and opportunities that support employee engagement and corporate values. The ability of management to retain

key employees is critical for profitability. Liedtka (2020) stated design thinking is a fuseful social technology to develop capabilities for adaptation and innovation.

Small business leaders and leaders of nonprofit and community organizations may benefit by considering the results of this study. Small business leaders can position employees to adapt, innovate, and remain competitive. Nonprofit and community leaders can work with employees and volunteers to adapt and innovate for organizations to remain relevant in an ever-changing economic environment. Liedtka (2020) suggested design thinking supports strategically valuable capabilities for innovation and adaptation. The importance of continued relevance by business leaders, supports underserved and disadvantaged individuals, families, and youth in our communities.

The results of this study may be disseminated through academic and professional conferences and corporate training sessions such as the OD Network Annual Conference and America's SBDC Conference. I hope that the publication of the study will result in more business for nonprofit and community leaders through becoming aware of the benefits of using design thinking. I hope that nonprofit and community leaders strongly consider design thinking as a process for organizational development and in support of strategic change management.

Recommendations for Further Research

Dura et al. (2019) noted design thinking supports the examination of problems and solutions from extreme user perspectives. For design thinking to be used for wicked problems, further study is required to understand the mechanics of expanded use by leaders for a positive impact to beneficiaries and others and for resolution of complex

issues. As I reviewed the extant literature, I found design thinking coupled with broad experience in the respective subject areas such as product design, biochemistry, physics, and materials science is essential to the success of projects. Further study to understand the dynamics between the process and how experience and knowledge influences and impacts project progress is needed. The study of how other organizational leaders have used design thinking to engage broad participation among employees and stakeholders requires additional research.

P2 and P4 noted non-naming of design thinking in the engagement with internal and external stakeholders. The study participants indicated that many stakeholders were reluctant to adopt another process due to being inundated with organizational processes. One possible justification for the non-use of the term "design thinking" was user uncomfortableness with ambiguity and dissent (Greenwood et al., 2019). The re-naming of design thinking to support adoption and practice requires further research.

Future researchers may include repeating this study with multiple small businesses from which findings similar to those of this study and future studies may be generalizable to other entities. Future researchers may also use a different data collection method such as a questionnaire, which may allow participants time to recollect and expand on their experiences to increase the amount and quality of data collected. The use of questionnaires may also increase participation in the study as compared to interviews which are contingent on the availability of participants and researchers. Future researchers may include the execution of non-disclosure agreements, which may give

participants assurances concerning the disclosure of confidential company information and the sharing of pertinent documents.

Reflections

The DBA doctoral study process was an exercise in persistence, resilience, and challenged my growth mindset. While embarking on the DBA doctoral journey, I considered the time commitment and requirements to sacrifice time and resources to complete the process. Over the time frame for completion of the coursework, prospectus, and proposal, I was faced with family challenges and personal hardship. However, family support and the value of exploration and challenge validated my ability to overcome doubt and provide expanded opportunities to influence my community positively.

I decided to embark on the DBA journey to expand my knowledge and challenge myself to become a scholar. I am pleased that I selected Walden University due to the level of support and encouragement from the faculty and staff. Throughout the journey, I have discovered how to mentor and coach individuals through similar processes from the examples provided by my instructors and committee. I am indebted to my chair for his guidance, firm commitment to excellence, and reliable support.

In selecting my participant organization, I considered the possible impacts on the company staff due to my prior work in the Hawaiian technology sector and my personal bias that the company was solely a research and technology organization with little or no commercialization activity or strategic focus. In conducting the study, I set aside my prior impression and was open to learning about the company and the experiences of the participants. I was concerned that my body language might suggest to participants of my

initial impressions but believe that I was successful in mitigating this area by staying within the parameters of my interview protocol. As I gained more understanding of the company and the activities of the employees, I was pleased to learn of that management was working to move the organization away from solely research and development to commercial activities. In completing the study, I feel that the organization is moving forward to the next level of success and prosperity. I look forward to using my knowledge and experience to help nonprofit and community group leaders.

Conclusion

In this study, five participants answered open-ended questions. The findings from my study were confirmed by the existing literature and supported by the conceptual framework. The participants confirmed that the use of design thinking supported the strategic development of the organization.

The purpose of this qualitative single case study was to explore organizational development processes small businesses use to address evolving market conditions and maintain competitiveness. I developed a central research question and five interview questions. Semistructured interviews were the primary method for data collection and reviewed relevant documents to confirm the interview to support triangulation. Member checking was used to validate my interpretation of participant responses to the interview questions. Participants were requested to review my interpretations of their respective interviews immediately after I completed the transcription and interpretation of the interview data.

My analysis of the data from the interviews and member checking provided three themes. The findings provided insight into the organization's use of processes and supported the themes of becoming a learning organization, becoming a problem seeking and identifying organization, and becoming a user-focused, market-driven organization, which modified the corporate culture from a solely research and development focus to a commercial and consumer focus. Design thinking was found to be a transformational organizational development process that enabled leaders of a small engineering, research and development, and technology business to s become more competitive as a user-focused and a learning organization. Small user-focused, learning organizations may be nimbler and more adaptable to address changing market conditions and remain competitive.

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Appendix A: Interview Questions

1. How has your organization used organizational development processes to address evolving market conditions and to maintain competitiveness?
2. How did you address the key challenges to implementing organizational development processes to address evolving market conditions and to maintain competitiveness?
3. What were the key barriers to implementing organizational development processes to address evolving market conditions?
4. How have you measured the effectiveness of your organizational development processes to maintain competitiveness?
5. What additional information can you provide about your organization's need to address evolving market conditions and to maintain competitiveness?

Appendix B: Open Source Stanford d.School Design Thinking Process

dschool info <info@dschool.stanford.edu>

Tue 3/26, 6:52 AM

Hi Keith,

The design thinking process is an open source and you are free to use this process for your doctoral study and other academic use.

Thank you,
Amanda

Amanda Tiet
Community Coordinator
Hasso Plattner Institute of Design (we call it the d.school)
Building 550, 416 Escondido Mall
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Keith Matsumoto

Mon 3/25, 6:46 PM

info@dschool.stanford.edu;

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416 Escondido Mall
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To Whom It May Concern:

I am a doctoral student at Walden University and am proposing to use the design thinking framework as the conceptual framework for my qualitative Doctoral Study. I am seeking approval from Stanford University, Hasso Platner Institute of Design to utilize the design thinking framework and to establish that the d.school process is "open source." Specifically, my study will consider the use of design thinking for organizational development and addressing change.

A response to this message will be greatly appreciated.

Keith Matsumoto

Thomas Lockwood <tom@lockwoodresource.com>
Sat 4/13, 6:22 AM

Hello Keith,

Indeed, the design thinking process is an open source concept. It is built and shared by the marketplace, there is no sole "owner" of design thinking. This is one of the beauties of this method of problem solving.

Best wishes with your research.

Cheers, Tom

Thomas Lockwood, PhD
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On Fri, Apr 12, 2019 at 10:02 PM Keith Matsumoto <keith.matsumoto@waldenu.edu> wrote:

Dear Dr. Lockwood:

I am a doctoral student at Walden University and am proposing to use the design thinking framework as the conceptual framework for my qualitative Doctoral Study. I am seeking approval to utilize the design thinking framework and to establish that the Stanford d.school process is "open source." Specifically, my study will consider the use of design thinking for organizational development and addressing change.

I have received confirmation from the Stanford d.school regarding the use of DT for my study and that the process is open-source. I would greatly appreciate a response to this message with confirmation that the Stanford d.school process is "open source" as was noted in *Innovation by Design (p. 24 – "*an open, shared, and co-developed concept.").

Keith Matsumoto