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Benefits of Conducting Postproject Reviews to Capture Lessons Learned

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This is to certify that the doctoral study by

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Abstract

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MS, New York University, 2004

BS, The Federal Polytechnic Ado-Ekiti, 1987

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Organizational learning has been a focus of scholars since 1970. Researchers have

demonstrated that conducting postproject reviews to capture lessons learned significantly

improves organizational learning. Guided by the concept of organizational learning, the

purpose of this case study was to explore how 6 New York metropolitan organizational

leaders used postproject reviews to prevent project managers from repeating the same

mistakes, increasing cost and time overruns, and experiencing project failure.

Semistructured face-to-face and phone interviews were conducted with a project sponsor

and 5 project managers in the New York metropolitan area. Data were analyzed using the

process of coding and condensing the codes, which produced 5 themes, including

effective lessons learned, capturing lessons learned, benefits of lessons learned, barriers

to postproject reviews, and leadership support. The findings of this study indicated that

organizational leaders used standard templates and organizational policies to ensure

project managers execute postproject reviews. Organizational leaders and project

managers may benefit from the findings of this study by learning the advantages of

conducting postproject reviews. This study may contribute to positive social change by

organizations achieving cost avoidance when they reduce project failures and increase

project success.

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Dedication

I dedicate this study is to my family, Oluwakemi (wife), Oluwaseun (daughter), and Oluwaseyi (son) for their understanding and sacrifice during the marathon journey of this doctoral degree. I appreciate their support, encouragement, patience, and love.

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Section 1: Foundation of the Study

Background of the Problem

The management and successful completion of a project within the budget and schedule are vital. Hence, capturing and employing lessons learned, both positive and negative improves the success of new projects (Parker, Charlton, Ribeiro, & Pathak, 2013). Conducting postproject reviews is an effective way of capturing and transferring valuable lessons learned. Postproject reviews involve evaluating the success and failure of projects, learning from mistakes, and sharing the knowledge to improve the success of projects (Parker et al.). Capturing and sharing experience for use on projects improve organizations' bottom lines, competitive advantage, and business practices (Jugdev, 2012). Organizations in the healthcare, nuclear power, rail, and aviation industries have successfully used lessons learned from past project experiences to improve their safety and systemic failures (Duffield & Whitty, 2015).

In practice, project teams often do not conduct postproject reviews to capture knowledge gained (Jugdev, 2012). Consequently, project teams lose significant knowledge every time a project ends, and management discharges the team without giving the team the opportunity to review and capture lessons learned (Rezania & Ouedraogo, 2013). Lack of learning from past mistakes has contributed immensely to increased project costs, extended schedules, considerable rework, and costly mistakes (Jugdev).

Problem Statement

Reasons for software development projects failure include many of the same problems noted by Brooks (1975) 30 years ago because managers do not conduct postproject reviews to capture lessons learned from past failures (Savolainen, Ahonen, & Richardson, 2012). Savolainen et al. reported that in 2007, 46% (53% in 1994) of software projects had cost or time overruns or did not meet users' requirements, and 19% (31% in 1994) were outright failures. The general business problem is that organizational leaders are not addressing the excuses of project managers for not capturing lessons learned, which is contributing to cost and time overruns and project failure. The specific business problem is that project managers often do not conduct postproject reviews, repeating the same mistakes, increasing cost and time overruns, and project failure (Selaolo & Lotriet, 2014).

Purpose Statement

The purpose of this qualitative case study was to explore how organizational leaders use postproject reviews to prevent project managers from repeating the same mistakes, increasing cost and time overruns, and project failure. The data collection was through interviews with one project sponsor and five project managers in organizations located in the New York Metropolitan area. This study has the potential to improve business practices and organizational competitive advantage by encouraging organizations to conduct postproject reviews to capture and share lessons learned among project teams to improve project success. In addition, the study may contribute to social change since most projects benefit the society, and with less costly mistakes and more

successful projects, organizational leaders can respond quickly to the needs of the society.

Nature of the Study

Qualitative research was the most suitable research approach for this study to explore the benefits of conducting postproject reviews to capture lessons learned and the impact of the review outcome on project success. In this study, I explored organizational leaders and project managers' experience regarding the effects of captured knowledge on improving project success. I conducted project case studies to explore how project managers apply captured lessons learned in project management to illustrate the benefits of conducting postproject reviews on project success.

The objective of this study aligns with the intent of qualitative research of exploring and obtaining in-depth understanding and description of an event or activity (Elo et al., 2014). I conducted an analysis of quantitative research to determine the appropriateness of the method for this study. The findings indicated that quantitative research was not appropriate because quantitative research is suitable for a study with numeric data, explanation, and hypothesis testing. Quantitative research is a method suitable for investigating relationships, cause-effect phenomenon, and conditions (Creswell, 2013). Moreover, quantitative research uses closed-ended questions to collect data and does not offer open-ended questions, which were appropriate to collect the data for this study. Open-ended questions provide the opportunity for project managers to explain their experiences of the benefits of applying captured lessons learned to projects with little or no limitations as imposed by closed-ended questions. Furthermore,

quantitative research uses closed-ended questions with precoded response options in a structured interview set up to collect data for testing hypotheses (Covell, Sidani, & Ritchie, 2012).

I considered all the qualitative research designs for this study including case study, grounded theory, narrative, ethnography, and phenomenology. The case study research approach was the most appropriate for this study. The objective of a case study research approach is to develop an in-depth understanding and description of a case or multiple cases of an event or activity (De Massis & Kotlar, 2014). In contrast, the grounded theory research approach is suitable for a study with the objective of developing a theory of a process or an action grounded in the perceptions of individuals (Thornberg, 2012). The ethnography research approach is suitable for a study with the objective of studying a cultural sharing group and collecting the data over a prolonged period (Murthy, 2013). The narrative research approach is suitable for a study where the researcher needs to explore the lives of individuals and tell the stories of the individuals (Hards, 2012). The phenomenological research approach is suitable for a study to understand personal experiences of people or groups who have shared a common phenomenon (Osborn & Smith, 2015). However, the focus of this study was not to (a) develop a theory, (b) study shared culture, (c) explore the lives of participants, or (d) explore personal experiences of a shared common phenomenon. Instead, the focus of this study was to obtain an in-depth understanding and description regarding applying captured lessons learned to improve project success. I chose the case study research approach over grounded theory, narrative, ethnography, and phenomenology approaches

because I explored the experiences of project managers regarding the application of captured lessons learned to improve project success.

Research Question

The central research question is the following: How do organizational leaders use postproject reviews to prevent project managers from repeating the same mistakes, increasing cost and time overruns, and project failure? The research question focused on the benefits of applying captured lessons learned to projects and the impact on project success to achieve the intent of this study. I conducted face-to-face and telephone semistructured interviews, with open-ended questions to obtain participants' experiences regarding the benefits and impact of captured lessons learned on project success.

Interview Questions

The face-to-face and telephone semistructured interview questions included the following:

1. How will you describe the conduct of postproject reviews or other means of capturing lessons learned that you attended and the outcome of the reviews?

2. What lessons learned did you employ on this project?

3. What were the benefits and impact of the lessons learned you employed on the success or failure of this project?

4. How did you capture the lessons learned from this project?

5. What is your view regarding conducting postproject reviews to capture lessons learned?

6. What strategies do organizational leaders implement to ensure project managers do

    not ignore postproject reviews?

Conceptual Framework

The organizational learning model is the conceptual framework for this study.

Argyris and Schon (1978) developed the organizational learning framework for detecting

and correcting errors. In addition, Argyris and Schon proposed that organizational

learning occurs through three ways: (a) single-loop learning, (b) double-loop learning,

and (c) deutero-learning. When people address a problem within the governing variables,

single-loop learning occurs, while double-loop learning occurs when people modify the

governing variables, and deuteron learning occurs when people inquire into the nature

and effects of an organization's learning system (Argyris & Schon; Smith, 2012).

Fiol and Lyles (1985) extended the definition of learning as the process of

improving actions through better knowledge and understanding. Additionally, Fiol and

Lyles and Smith (2012) described the concept of organizational learning as a learning

system that contributes to organizational memory and develops employees through the

accumulation of experiences. The model of organizational learning applies to this study

because the theory holds that learning is essential for the growth of individuals and

organizations through the accumulation of experiences. One of the ways of accumulating

histories and experiences of people and companies is conducting postproject reviews,

which was the intent of this study. Moreover, I explored the benefits of accumulated

history and experiences in improving project success. Furthermore, organizational

learning applies to this study because individuals and organizations can incorporate their

experiences into the future planning process through lessons learned (Fiol & Lyles; Smith).

Operational Definitions

This section comprises scholarly definitions of terms used in this study. The use of scholarly descriptions strengthens the meaning of the terms. The following are the relevant key terms:

Explicit knowledge: Explicit knowledge is a formal and organized kind of knowledge acquired in a written form and is made available for sharing and transferring by members of an organization (Borges, 2012).

Individual learning: Individual learning is the process by which individuals increase their personal expertise to increase an organization's capacity for effective performance (Baxter, Goffin, & Szwejczewski, 2013).

Knowledge barriers: Knowledge barriers are factors that obstruct the capturing of lessons learned and sharing and transferring knowledge within an organization (Shokri-Ghasabeh & Chileshe, 2013). Shokri-Ghasabeh and Chileshe identified lack of employee time, resources, clear guidelines, and management support as potential barriers to capturing, sharing, and transferring knowledge.

Knowledge loss: Knowledge loss is the intentional or unintentional evaporation of knowledge accumulated from individuals and collective learning (Daghfous, Belkhodja, & Angell, 2013). Knowledge loss occurs when individuals retire or leave an organization with knowledge not shared or stored in an organization's knowledge database.

Knowledge management: Knowledge management is the management of capturing, storing, sharing, and transferring knowledge, and retrieving captured and saved knowledge with appropriate technology to improve organizational learning (Shokri-Ghasabeh & Chileshe, 2013).

Knowledge sharing: Knowledge sharing is the process of exchanging information and expertise among members of an organization to address problems, develop new ideas, and implement standard procedures (Amayah, 2013). Within an organization, members share knowledge through face-to-face interactions, e-mail, and telephones (Amayah).

Knowledge transfer: Knowledge transfer is the process of transferring organizational knowledge from one team to another to enhance organizational performance (Harvey, 2012).

Lessons learned: The process of lessons learned is one of the primary sources of knowledge, alongside recorded documents, experiences, and interactions (Shokri-Ghasabeh & Chileshe, 2013). Effective application of lessons learned reduces or eliminates potential failures or reinforces a positive result (Carrillo, Ruikar, & Fuller, 2013)

Organizational learning: Organizational learning is the detection and correction of a discrepancy between the knowledge that organizational leaders aspire to achieve and actual knowledge gained (Smith, 2012). Organizational leaders could accomplish learning within the organizations by changing the existing mental models, norms, policies, and assumptions underlying the day-to-day actions and routines (Smith).

Society: Society is a group of people living together in a more or less ordered community. Organizations develop corporate social responsibility initiatives to contribute to the sustainability and development of societies (Barber & Jackson, 2012). Society benefits from successful projects, which contribute to the sustainability and development of the community.

Tacit knowledge: Tacit knowledge is an individual acquired experience and is difficult to share with members of an organization because the knowledge comprises a combination of technical skills and personal perspectives, beliefs, and mental models (Borges, 2012).

Team learning: Team learning is the process of project teams working together to create a shared understanding of knowledge, working together, and gathering knowledge collectively to improve organizational performance (Okumus, 2013).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions serve as part of the foundation of research and include facts that researchers assumed to be true but not verified (da Mota Pedrosa, Näslund, & Jasmand, 2012; Newman, Hitchcock, & Newman, 2015; Tufford & Newman, 2012). This study included several assumptions in exploring the perceptions of project managers regarding the benefits of conducting postproject reviews to capture lessons learned to improve project success. The first assumption was that the study participants would represent the beliefs of the study population. The second assumption was that at least two participants would be available to participate in interviews. The third assumption was that the

participants would provide truthful and candid responses about conducting postproject reviews at the completion of a project to capture lessons learned. The fourth assumption was that the participants would give accurate answers when I asked them questions that related to the research problem. The fifth assumption was that this study group of organizational leaders and project managers would represent the views of most project management professionals regarding capturing lessons learned. The sixth assumption was that this study of organizational leaders and project managers would assume accurate and honest interpretation and analysis of study data. The seventh assumption was that the personal semistructured interviews would offer an opportunity to explore themes relating to the topic of the study. The eighth assumption was that this study would include objective findings.

Limitations

Limitations are potential weaknesses of a study identified by the researcher (da Mota Pedrosa et al., 2012; Newman et al. 2015; Tufford & Newman, 2012). Limitations are uncontrollable and serve as a threat to the internal validity of a study (da Mota Pedrosa et al.; Newman et al.; Tufford & Newman). The case study research approach used in this study has several limitations that may weaken the study. The subjectivity of case study research approach, which illuminates the embodied, subjective, and intersubjective qualities of life-world, is a limitation (Tomkins & Eatough, 2013). The subjectivity of a case study research approach is evident in critical analysis research, where researchers interpret the findings in various ways (Tsang, 2014). Hence,

researchers and practitioners should view the findings that emerge from this study as interpretations of the subjective perceptions of the participants in this study.

Another limitation of this case study research approach relates to my professional background in project management and personal belief in learning from past successes and failures. My professional experience and beliefs support the conduct of a postproject review to capture learning and are potential bias for this study. In a qualitative case study research, the researcher is the key instrument in the collection of data and an essential part of the process (Houghton, Casey, Shaw, & Murphy, 2013). Therefore, it may be difficult to separate my professional experience and personal belief from the study topic or participants.

To mitigate potential research bias, I collected the data in a natural setting where the participants experience the study topic and feel comfortable. Additionally, I used inductive and deductive logic to build the themes and allowed the responses of the participants to drive the study outcome. Furthermore, I stated my position, experience, biases, and assumptions that might influence the interpretation of the research findings. I identified potential ethical issues when I requested approval for the inquiry and before I contacted the participants to gain their consent for participation. Moreover, I used rich description and member checking to enhance the reliability and validity of the research findings. Other limitation of this case study research approach includes the small sample size of six participants. This study considered case projects in the New York Metropolitan area.

Delimitations

Delimitations are characteristics researchers use to limit the scope of a study and define the boundaries (da Mota Pedrosa et al., 2012; Newman et al., 2015; Tufford & Newman, 2012). Delimitations have the potential to influence the external validity or generalizability of study findings (da Mota Pedrosa et al.; Newman et al.; Tufford & Newman). Exploring the experience of organizational leaders and project managers in the New York metropolitan area regarding conducting postproject reviews to capture and share lessons learned limits the scope of this study. The sampled participants were one project sponsor and five project managers who have more than 5 years of project management experience and have participated in previous postproject reviews or other processes of capturing lessons learned. I did not generalize the findings of this study; however, I suggested the study for any population size or other geographical regions. Using the organizational learning model as a conceptual framework for this study limited the scope. The concept of organizational learning applies to this study because organizational learning improves the performances of individuals and organizations through the accumulation of experiences (Smith, 2012).

The qualifying factors for the convenience selection of participants for this study consisted of having at least 5 years of project management experience and participation in previous reviews. In addition, the participant needed to be willing and available to participate in a semistructured interview process. The open-ended questions for the semistructured interviews focused on exploring organizational leaders' and project

managers' experience regarding conducting postproject reviews to capture and share lessons learned.

Significance of the Study

Conducting postproject reviews is one of the mechanisms used to capture and share learning to improve project success and contribute to organizational learning. However, despite the benefits of postproject reviews, project teams often do not perform postproject reviews after project completion (Jugdev, 2012). Managing projects well and learning from one project to the next becomes vital for project success (Duffield & Whitty, 2015).

Contribution to Business Practice

This qualitative case study allowed organizational leaders to understand the effectiveness and benefits of applying lessons learned from successful and failed projects to improve project success. Realizing the benefits of captured and documented experiences allow project teams to leverage organizational knowledge (Selaolo & Lotriet, 2014). Furthermore, when project managers understand potential project risks, they may leverage the organizational knowledge base to mitigate the risks (Selaolo & Lotriet, 2014). Moreover, this study showed the benefits of establishing a knowledge management system within organizations to preserve the critical knowledge gained by project teams. Project managers can leverage the knowledge system to prevent reinventing the wheel for potential risks in projects or repeating past mistakes in projects. The purpose of this study was to explore the experience of organizational leaders and

project managers regarding the benefits and impact of applying lessons learned to improve project success.

Implications for Social Change

This study offered insight into how organizations could use the knowledge gained from past projects to improve business practices and organizational competitive advantage. Organizations benefit through cost avoidance when project teams apply standard and improved business practices, which improve project performance (Wysocki, 2014). Organizations achieve cost avoidance when they realize a significant reduction in project failures and increase in project success. Similarly, when a project team applies knowledge from past projects to future projects, the success rate of future projects increases tremendously (Jugdev, 2012). This study contributed to social change because when an organization is successful, the organizational leaders hire more people to manage new projects, and the communities benefit through more and improved infrastructures. In addition, organizations respond quickly to societal needs when more projects are successful. Part of the intent of this study is to let organizational leaders see how society benefits from the practice of capturing lessons learned to improve project success.

A Review of the Professional and Academic Literature

In this section, I present the theoretical literature on organizational learning, which serves as the foundation for this study. In the literature review, I followed a chronological order of presenting the early thoughts on organizational learning followed by current thoughts. The literature review contains two sections. The first section

includes a review of early research on the development of organizational learning theory from its earliest form in the 1970s. The second section includes a review of current research on organizational learning. The current research includes (a) explicit and tacit knowledge, (b) knowledge sharing, (c) knowledge transfer, (d) knowledge loss, (e) lessons learned, and (f) knowledge barriers.

The concept of organizational learning applies to this study because the concept supports the accumulation of knowledge to improve the development of individuals and organizations. The purpose of this study was to explore the experience of organizational leaders and project managers regarding the application of captured lessons learned and the impact on project success. Captured experiences contribute to organizational memory and prevent a repetition of mistakes, resulting in improved performance (Carrillo et al., 2013).

Title Searches, Articles, Research Documents, and Journals

The research materials used for the literature review consisted of scholarly peer-reviewed journals and articles from Business Source Complete, ABI/INFORM Complete, and Emerald Management Journals. Additional materials include SAGE Premier, Google Scholar, Project Management Institute database, and dissertations accessed through Walden University Library database. Moreover, the literature review consists of scholarly books that are relevant to organizational learning. Table 1 shows the summary of peer reviewed journals and articles, dissertations, and scholarly books on related areas of organizational learning presented in this section. The total literature reviewed was 147, with 139 (94.6%) literature published in or after 2012, within 5 years of the

anticipated chief academic officer (CAO) approval date. The keywords used in the search included (a) *construction projects*, (b) *continuous improvement*, (c) *cross-project learning,* (d) *engineering projects*, (e) *IT projects*, and (f) *infrastructure projects*. Additional keywords included (a) *knowledge discovery*, (b) *knowledge dissemination*, (c) *knowledge gained*, (d) *knowledge loss*, (e) *knowledge management*, and (f) *knowledge sharing*. More keywords included (a) *knowledge transfer*, (b) *learning*, (c) *lessons learned*, (d) *organizational learning*, (e) *performance improvement*, and (f) *project feedback*. Other keywords included (a) *project reviews*, (b) *postmortem reviews*, (c) *postproject assessment*, (d) *postproject reviews*, (e) *project learning*, (f) *tacit knowledge*, and (g) *project-to-project learning*.

Table 1

Summary of Reviewed Literature

Research topic	Peer reviewed journals/articles	Dissertations	Scholarly books	Total
Organizational learning	21	2	4	27
Explicit and tacit knowledge	19	0	0	19
Knowledge sharing	25	1	0	26
Knowledge transfer	23	1	0	24
Knowledge loss	7	0	0	7
Lessons learned	27	4	0	31
Knowledge barriers	12	1	0	13
Total	134	9	4	147

Organizational Learning

Empowerment and knowledge conversion have opposing effects on the first and second order of organizational learning (Smith, 2012). Empowerment affects second-order learning positively and affects first-order learning negatively; while knowledge conversion relates positively to first-order learning and relates negatively to second-order learning (Smith). Hence, efforts to improve organizational learning on one dimension may affect the other unmeasured dimension. Single-loop and double-loop learning are incompatible in the sustainability of economic, social, and environmental contexts;

however, double-loop learning contributes positively to the process of achieving successful organizational sustainability (Smith).

Organizational learning influences organizational performance positively through organizational innovation (García-Morales, Jiménez-Barrionuevo, & Gutiérrez-Gutiérrez, 2012). However, corporate culture could also act as a barrier (García-Morales et al.). Organizational learning requires a structure to occur and encourage learning loops, which contribute to the viability of projects (Reyes, 2012). Reyes stated that sound learning loops require the design of structural mechanisms, which might produce natural contexts for establishing and nurturing learning processes. Additionally, learning loops act as built-in mechanisms that maintain motivation and inertia in project teams to sustain projects and adapt the mechanisms to changes that may affect projects' goals (Reyes).

Managers encourage and improve organizational learning and performance by enacting individual behavior and coaching approach that translate individual learning into collective learning (Swart & Harcup, 2013). Swift and Hwang (2013) indicated that effective trust is more important than reasonable confidence in sharing social knowledge while cognitive trust is more important in creating an organizational learning environment. Hence, organizations need to focus on processes such as job rotation and employee screening that could promote affective and cognitive trusts to achieve social knowledge sharing and conducive organizational learning environment. Reynolds (2014) identified organizational culture and structure, management systems, and replicating the effect of a free market as an integrated leadership strategy to build organizational ambidexterity within organizations.

When project team members leverage their strengths and address their limitations, they increase the effectiveness of management and enhance organizations' capacity to acquire knowledge (Rodgers, 2014). For organizations to stay current and compete within the knowledge economy, managers must develop training programs that can deliver the initial training necessary for learning and innovation, increasing productivity (Morris, 2013). Sharing tacit knowledge within an organization helps to build knowledge database, which is accessible to apply to project-based challenges that construction organizations frequently encounter (Kelly, Edkins, Smyth, & Konstantinou, 2013).

Construction professionals select construction methods based on personal knowledge (Ferrada & Serpell, 2013). Hence, construction managers develop strategies to identify, acquire, store, transfer, and effectively use knowledge in individuals to improve organizational learning (Ferrada & Serpell). Construction organizations can incorporate knowledge management technologies and techniques to their operations to address challenges that they frequently encounter with effective organizational learning. To meet the challenge of making project-level knowledge available to the organization as a whole, managers improve the collaboration among project teams to overcome barriers to learning in project-based organizations (Bartsch et al., 2013). By establishing knowledge management strategy, managers encourage sharing and retaining knowledge, enhancing the value of project teams' learning (Bartsch et al.)

Early Research on Organizational Learning

The conceptual framework for this study focused on organizational learning. Argyris and Schon (1978) developed and described organizational learning framework

for the detection and correction of errors. Extending the understanding, Fiol and Lyles (1985) described organizational learning as the process of improving actions through better knowledge and understanding. Moreover, the concept of organizational learning is a learning system that contributes to organizational memory and develops employees through access to accumulated knowledge (Fiol & Lyles). Mirvis (1996) argued that old lines of thought and research into the ways that managers perceive, sort, interpret, generalize, and translate information support the concept of organizational learning. Organizational learning is a concept that informs and communicates knowledge, and considering information as the lifeblood of an organization, learning governs the circulation and value within an organization (Mirvis).

Organizational learning started as organizational development where individuals learn by doing, and the knowledge from past endeavors contributes to their personal development (Mirvis, 1996). Facilitating learning, managers often offer routines of fact-finding and problem-solving ideas to employees through organizational development (Argyris, 1970). Mirvis indicated that as the field of organizational development develops, more opportunities became available for people to access richer sources of captured knowledge and gain better personal development.

Argyris and Schon (1974) identified problems with individual development by finding a gap between people's adopted theory and the theory in use. Hence, Argyris and Schon concluded that people often define situations to have control over their environment and maximize their likelihood of winning. Moreover, people minimize negative feelings and make their actions seem rational and sensible (Argyris & Schon).

The threat of problems exposing the flaws in learning and the competitiveness behind managers' decisions further mixed up the situation of personal learning deficiencies (Argyris & Schon). Furthermore, Argyris and Schon identified personal, organizational ideas of defensive routines, which could lead to flawed thinking in collective learning, and proposed single-loop learning framework.

Bateson (1972) stated that the human mind could learn how to acquire knowledge. Argyris and Schon (1978) proposed another framework of double-loop organizational learning to build on the ability of human assimilation to acquire more knowledge. In the double-loop learning, individuals and teams engage in inquiry, the testing of assumptions, and the definition of situations. The double-loop learning process opens up the second loop of inquiry whereby a system scans itself and learns how it learns (Argyris & Schon, 1974). In line with developing organizational learning, managers started building learning organizations and promoted collective thinking (Isaacs, 1994). Furthermore, managers identified and addressed the gaps between adopted theories of learning and the theories in use to help individuals and teams (Isaacs). In addition, managers developed simulations to imitate system dynamics and challenged people to engage in systems thinking on a common scale (Senge, Kleiner, Roberts, Ross, & Smith, (1994).

Current Research on Organizational Learning

Organizational learning varies the way in which an organization resolves potential organizational problems and prevents the repetition of mistakes (Jugdev & Mathur, 2013). Managers have identified learning as an essential and contributing factor to the

growth of organizations (Bartsch et al., 2013). However, organizations have often found it hard to learn from completed projects (Ferrada & Serpell, 2013). Emmons (2013) indicated that sustaining improvements in an organization depend largely on the organization's ability to learn. Many researchers concluded that individual and project team learning were crucial to organizational learning, and capturing experiences is an effective means of stimulating organizational learning (Baxter et al., 2013). Moreover, researchers believe that tacit knowledge is a difficult concept to process; hence, project managers use metaphors and stories to capture knowledge (Maluleke & Marnewick, 2012).

Explicit and Tacit Knowledge

Explicit and tacit knowledge are two types of knowledge sources for organizational learning. Explicit knowledge is knowledge written down and easily transfer from one individual or organization to another (Cumberland & Githens, 2012). However, because explicit knowledge is in writing, competitor organizations can easily copy the knowledge. In contrast, an organization gains tacit knowledge through experience, and it is hard to explain because the knowledge exists in individuals' heads (Cumberland & Githens). Individuals share tacit knowledge often through collaboration with the person who possesses the knowledge and transfer the knowledge through storytelling, demonstration, and other means of sharing knowledge. Sharing knowledge is the primary means through which people exchange knowledge and contribute to an organization's learning, improving the competitive advantage (Wang & Wang, 2012). The practice of sharing knowledge in an organization is essential for preserving valuable

experiences, learning new techniques, solving problems, and creating core competencies (Wang & Wang).

Explicit knowledge sharing comprises all forms of knowledge sharing institutionalized within an organization. Managers capture, codify, and transmit explicit knowledge through procedures, formal languages, handbooks, and information technology system. Likewise, managers express and communicate explicit knowledge through written documents such as reports or manuals (Hau, Kim, Lee, & Kim, 2013). Organizational knowledge usually incorporates a greater proportion of explicit knowledge (Venkitachalam & Busch, 2012).

In contrast, the foundation of sharing tacit knowledge is human experience while the face-to-face interaction is the primary means of sharing the knowledge (Wang & Wang, 2012). Tacit knowledge is often difficult to define because of its indescribable characteristics (Venkitachalam & Busch, 2012). However, Venkitachalam and Busch acknowledged the impact of tacit knowledge on organizational learning, intellectual capital, and knowledge management strategy for realizing organizational success. Sharing and transferring tacit knowledge improve organizational learning and contribute significantly to individuals and organizations' competitive advantage.

Managers have found it difficult to articulate or codify tacit knowledge because individuals have the knowledge embedded in their heads (Hau et al., 2013). Similarly, personal knowledge comprises of tacit knowledge and is usually difficult to articulate; however, depending on the circumstances, managers can codify tacit knowledge (Venkitachalam & Busch, 2012). Managers view tacit knowledge as procedural

knowledge with relevance to daily activities, which individuals can employ in stratagems, becoming useful intelligence to organizations.

When managers encourage employees to share useful knowledge across the organization, the strategy increases and sustain the organization's learning and competitive advantage (Hau et al., 2013). Likewise, encouraging the transfer of best practices among individuals and units within an organization improves the organization's knowledge base and success. Similarly, best practices are difficult to replicate internally across organizational units just as an organization's unique competencies are difficult for competitors to replicate externally (Venkitachalam & Busch, 2012).

What constitutes organizational knowledge is the knowledge of individuals within an organization; however, the sharing of knowledge among individuals constitutes a substantial element of organizational knowledge. The increasing migration of experts from one organization to another has contributed to the need for recognizing organizational knowledge and implementing strategies to ensure sharing and transfer of knowledge among employees. Furthermore, organizations started to acknowledge the importance of developing key methods to manage knowledge effectively (Venkitachalam & Busch, 2012). Venkitachalam and Busch identified four stages of intraorganization knowledge transfer to include initiation, implementation, ramp-up, and integration.

Managers communicate tacit knowledge through direct interaction and storytelling because converting tacit knowledge into explicit knowledge is difficult (Borges, 2012; Matošková et al., 2013). However, Matošková et al. acknowledged the importance of tacit knowledge in solving organizational problems to improve the growth

of organizations. Learning takes place at various levels, including individual, project team, and project-to-project. Bartsch et al. (2013) recognized the importance of project-to-project learning to the success of organizational learning. Similary, Gubbins et al. (2012) found that managers could promote project-to-project learning by transferring people between projects or using an electronic storage system.

Many researchers have acknowledged individual learning as the basis for organizational learning (Gubbins et al., 2012). To achieve organizational learning, organizational leaders encourage project managers to keep notes of what they learned and share the notes with their team members (Durst & Wilhelm, 2012). Similarly, organizational leaders recommend that project managers keep learning logs (Durst & Wilhelm). Borges (2012) emphasized that organizational learning depended on the experience of project managers and produced a checklist of essential elements to consider in individual learning. The list includes managing technical risks, commercial risks, and project team members (Borges). Maluleke and Marnewick (2012) identified postproject reviews as the best opportunities for capturing individual learning and transferring lessons learned to improve the success of future projects. Individual learning could lead to knowledge transfer within project teams; however, project managers must capture individuals' learning before project teams start a new project (Yoong & Patel, 2013).

Tacit knowledge is essential in project teams (Gharaibeh, 2012). Team learning depends on the interactions between individuals and their willingness to share their experiences of the success or failure of previous projects (Okumus, 2013). Similarly, Selaolo and Lotriet (2014) indicated that learning can occur through informal contact,

although, formal approaches are necessary for documentation purposes. Furthermore, Selaolo and Lotriet identified collating individuals' experience into checklists and databases and postproject reviews as means of stimulating project team learning.

Explicit and tacit knowledge are strengthening qualities of knowledge and mutually dependent (Schmitt, Borzillo, & Probst, 2012). Tacit knowledge guides individuals on how to apply explicit knowledge effectively, by providing the necessary conditions for structuring, developing, and interpreting explicit knowledge. Managers can articulate explicit knowledge and replace an individual's explicit knowledge with a new explicit knowledge that remains in organizations' database even when individuals leave organizations (Schmitt et al.). However, tacit knowledge is harder to replace than explicit knowledge and more valuable to organizations, since managers cannot substitute an individual's tacit knowledge with another tacit knowledge (Schmitt et al.).

Depending on the value of a person to an organization, losing employees carries the risk of losing the knowledge in individuals' memories if the knowledge is not in the organization's database (Schmitt et al., 2012). An individual's tacit knowledge may be subject matter expertise, knowledge of certain decisions and projects' undocumented results. The cost of losing an individual's tacit knowledge can be enormous. When managers fail to capture and retain the knowledge of employees when the employees leave the organization, they leave with the knowledge. Tacit knowledge is difficult to manage and is only transferable through highly interactive conversations (Schmitt et al.). Hence, managers need to implement dense employee networks that enhance collaboration and can contribute to interaction and knowledge transfer (Schmitt et al.). However,

network density and multiple interactions between employees are not sufficient for transferring tacit knowledge and do not guarantee the exchange of ideas and knowledge (Sabbir Rahman & Hussain, 2014). In addition, interactions that form collaborations stimulate the flow of tacit knowledge among individuals (Sabbir Rahman & Hussain).

Collaboration is vital in sharing and transferring knowledge within organizations by bringing individuals together to work and share knowledge (Cepeda-Carrion, Cegarra-Navarro, & Jimenez-Jimenez, 2012). Individuals interact more, exchange ideas, and observe the application of colleagues' tacit knowledge in an open and collaborative work environment. The critical role of collaboration in transferring tacit knowledge provides insights into the loss of employees' specific functional expertise when employees leave organizations (Cepeda-Carrion et al.). Managers can decrease an organization's dependency on individual tacit knowledge by increasing multiple collaborations among team members, reducing the possible loss of tacit knowledge when individuals leave the organization.

Multiple collaboration opportunities allow knowledge sharing and reduce dependency on individual tacit knowledge. Individuals' critical weak network connections create an organizational memory network that supports the organization's competitive strength in building core competencies. Organizations with strong network ties are less likely to experience knowledge loss when individual experts leave the organizations than organizations with weak network ties (Schmitt et al., 2012).

Employees' dependency on their managers often fosters changes in established work routines, which could lead to knowledge loss. Organizations that maintain

leadership structure are less likely to experience knowledge loss when individuals with critical expertise leave the organizations than organizations with a modified leadership structure (Schmitt et al., 2012). Trust is importance in an organization's capability to rely on retained knowledge. Organizations with high levels of perceived procedural justice are less likely to experience knowledge loss when individuals with critical expertise leave the organizations than organizations with low levels of perceived procedural justice (Schmitt et al.).

In the current global marketplace where speed to market is critical, organizations must have strategies in place to transfer knowledge quickly and efficiently to improve their competitive advantage. Cumberland and Githens (2012) indicated that knowledge is not just a source of improving organizational competitive advantage, but rather an important factor in the success of an organization. An organization tends to have a longer life span when the managers become effective in transferring knowledge than organizations that do not practice the process of knowledge transfer. Managers must identify the knowledge that exists within their organization, and create strategies for capturing and sharing that knowledge to boost the organizations' intellectual capital portfolio (Cumberland & Githens).

Likewise, in a franchise organization system, an individual gain tacit knowledge by doing and is hard to capture and codify (Cumberland & Githens, 2012). Individuals and groups transfer tacit knowledge through personal interactions and sharing of experiences including training manuals and books. Successful transfer of tacit knowledge vertically between the parent franchise organization and other franchise

organizations offers a competitive advantage to organizations (Cumberland & Githens).

Likewise, horizontal transfer of tacit knowledge between franchise organizations offers a

key strategic advantage to best competitors and build market share (Cumberland &

Githens).

Knowledge Sharing

Knowledge sharing is the primary means of exchanging knowledge among

employees and contributes significantly to organizations' knowledge application,

innovation, and competitive advantage (Wang & Wang, 2012). Paulin and Suneson

(2012) defined knowledge sharing as the exchange of knowledge between and among

individuals, and within and among teams, organizational units, and organizations.

Additionally, knowledge sharing is an exchange of knowledge between two people that

involve the owner of the knowledge and the recipient of the knowledge (Paulin &

Suneson). In knowledge sharing, the focus is on the interaction of individuals to build

human capital.

Knowledge constitutes valuable intangible assets in creating and sustaining

organizational competitive advantage. In organizations, managers implement strategies

to encourage individuals to learn not only from their direct experiences but also from the

experiences of others. Managers organize several events to provide the forum for

employees to interact with one another and exchange knowledge among themselves

through feedback, explanation, and advice (Wang & Wang, 2012). In business

operations, sharing knowledge among employees enables quick response to customer

demands at low costs, boosting demands, and increasing organizations' bottom line (Hau

et al., 2013). Implementing knowledge sharing strategy in some organization has become an integral part of the organizations' learning activities, leading to improved innovations and successful results.

Knowledge constitutes substantially valuable assets for developing and improving organizational competitive advantage (Kumaraswamy & Chitale, 2012). Sharing knowledge is one of the means of creating organizational learning. Organizations encourage knowledge sharing to prevent the loss of knowledge. Several factors affect the exchange of knowledge in organizations such as technology, corporate culture, incentives, and trust (Amayah, 2013).

Retaining knowledge is vital to organizational learning and competitive advantage, and furthering understanding (Martins & Meyer, 2012). Martins and Meyer identified (a) knowledge behaviors, (b) strategy implementation, (c) leadership, and (d) risks of losing knowledge as factors that influence knowledge sharing. Likewise, Connelly, Zweig, Webster, and Trougakos (2012) indicated that a significant relationship exists between individuals' level of moral reasoning and the desire to share knowledge. Configuring the internal and external networks that support the process of knowledge management efficiently and reorganizing the structure of the systems improve the process of knowledge acquisition and appropriate use (Lopez & Esteves, 2013).

Information technological (IT) has contributed to the creation of knowledge management process to improve collaboration and sharing of knowledge and practices in organizations (Pemsel & Wiewiora, 2013). Likewise, a significant correlation exists between the quality of knowledge management system, social identification, and trust

and have a facilitating effect on online knowledge sharing within organizations (Ho, Kuo, & Lin, 2012). The development of new competencies among employees and systems of competency-based management improves individual and organizational knowledge sharing (Ho et al.). Creating a holistic business view and competency-based management; promoting learning; and improving IT infrastructure enable managers to transfer knowledge and influence organizational performance (Palacios-Marqués, Peris-Ortiz, & Merigó, 2013). In addition, the combination of knowledge transfer, holistic view, competency-based management, and continuous learning is vital to the success of knowledge management in organizations (Palacios-Marqués et al.).

Organizational cultures within an organization have a significant influence on overcoming barriers to knowledge sharing among project teams and improve organizational learning (Bartsch et al., 2013). In sharing social knowledge, emotional trust influences individual behavior than cognitive trust; however, cognitive trust influences the creation of organizational learning environment (Swift & Hwang, 2013). Similarly, establishing trust at workplace influences the behavior of organizational knowledge sharing and has a significant effect on the expected personal benefits from (Kuo, 2013). Additionally, individual emotional trust controls the relationship between emotional commitment and knowledge sharing, and the relationship between the cost of knowledge sharing and knowledge sharing (Casimir, Lee, & Loon, 2012). Furthermore, the organizational culture encourages emotional-based trust between individuals and facilitates knowledge sharing (Casimir et al.).

Self-efficacy and anticipated reciprocal relationships influence individual attitude towards sharing knowledge while promised rewards have no impact on individual willingness to share knowledge (Witherspoon, Bergner, Cockrell, & Stone, 2013). However, Chalkiti (2012) argued that job satisfaction, organizational commitment and identification, management styles, organizational culture, and motivation and rewards influence knowledge sharing. Additionally, attitudes to knowledge sharing, training, and social interactions and networks enable familiarization among individuals, encouraging knowledge sharing (Chalkiti).

The governance of knowledge influences knowledge sharing and enhances organizational network, maximizing the economic and social benefits of knowledge sharing (Cao & Xiang, 2013). Likewise, organizational culture, personality traits, and social environment influence knowledge sharing among project teams (Borges, 2012). Furthermore, introvert project team members willingly share personal knowledge when they experience real social interactions in the workplace (Borges). Organizations' intergenerational environments have a significant effect on culture, which enables individualism in organizations (Burris, 2012). Sharing tacit knowledge on projects develop explicit organizational knowledge, which helps in resolving and better manage project-based challenges that organizations frequently encounter (Kelly et al., 2013). When experts depart from knowledge-intensive organizations, managers lose subject matter expertise and knowledge about business relationships and social networks (Joe, Yoong, & Patel, 2013). Managers also lose knowledge of business systems, processes, and value chains; and knowledge of governance (Joe et al.). Losing knowledge is a

concern to organizations; hence, organizations need to implement practices to capture and

share lessons learned to prevent knowledge loss. Wu (2012) acknowledged that

knowledge is a crucial source of sustainable competitive advantage for most

organizations, and in response to increasingly drastic and competitive environments,

many organizations use organizational learning to improve performance. The strategy of

knowledge management in most organizations is for managers to address the problem of

knowledge loss when employees leave the company. Jennex (2014) argued that an

organization could create a system for identifying the knowledge that could be lost and

develop appropriate means for capturing the knowledge before losing the knowledge.

Most organizations retain and disseminate knowledge, improve strategic coordination

among organizational units, and develop existing capabilities through different

networking strategies and efficient networks (Daghfous et al., 2013). Organizations also

transform organizational skills into effective organizational routines to mitigate

knowledge loss and increase knowledge retention (Daghfous et al.).

Similarly, sharing knowledge offers new innovative combinations of knowledge

by arousing fresh thinking. When an organization's knowledge base comprises diverse

fields, the organization needs a strategy to create new perspectives on the existing

organizational learning. Knowledge sharing provides a process, through which

organizations can connect and integrate broad organizational knowledge across disparate

fields and generate innovative ideas (Zhou & Li, 2012).

Knowledge sharing involves the horizontal integration of personal knowledge,

which contributes to broad corporate knowledge database that provides knowledge

interface among functional units (Zhou & Li, 2012). Increased interactions and knowledge exchange allow individual members of different functional units to recognize how other people's knowledge bears on their knowledge and are encouraged combine knowledge to serve the goals of organizations (Zhou & Li). The use of best practices across functional units improves an organization's ability to commercialize its ideas into creative innovations. Zhou and Li posited that an organization with a broad knowledge base benefited more from knowledge sharing than from market knowledge acquisition for fostering its innovative ideas. In contrast, an organization that has deep knowledge will benefit more from market knowledge acquisition than from knowledge sharing because such an organization would have accumulated extensive experience and knowledge about existing technologies and markets. Furthermore, an organization with a deep knowledge base benefits more from market knowledge acquisition than from knowledge sharing for fostering its innovative ideas (Zhou & Li).

By developing deep knowledge and core competencies such as technical and professional expertise, organizations can leverage their specialized fields. When organizations activate the integration and use of best practices among individuals, knowledge sharing emphasizes the organizations' self-reinforcing cycle of competencies. Acquiring market knowledge provides access to diverse knowledge areas such as competitors, suppliers, distinct approaches to reasoning, and varied problem-solving techniques (Zhou & Li, 2012).

Knowledge Transfer

Knowledge transfer is the process through which individuals, teams, and units exchange experience and knowledge within an organization (Fang, Yang, & Hsu, 2013). Knowledge transfer involves sharing of knowledge by the knowledge source and the acquisition and application of knowledge by the recipient (Harvey, 2012). Paulin and Suneson (2012) defined knowledge transfer as the variety of interactions between individuals and groups; within, between, and across groups; and from groups to the organization. Furthermore, knowledge transfer is a focused, unidirectional communication of knowledge between individuals, groups, and organizations (Paulin & Suneson). The knowledge owner assumes that the recipient of the knowledge transferred has a sound understanding of the knowledge, and the ability to apply the knowledge properly.

Managers see knowledge as an intangible asset, which is valuable, distinctive, and hard to replicate. In this trend of globalization, managers use inter-organizational knowledge transfer as a vehicle for creating value and developing competitive advantage (Fang et al., 2013). The quality of relationship among individuals, prior experience, and cultural and geographical distance are important factors in achieving a successful inter-organizational knowledge transfer (Fang et al.).

Motivation and communication are acknowledged barriers to transferring knowledge from one project team to the other, a critical factor to accomplishing innovation in most organizations (Hu & Randel, 2014). Exploring the perception of knowledge transfer within informal social networks, Deville (2012) claimed that knowledge transfer

efficiently occurs through combined formal and informal social networks. Investigating the usefulness of project learning capability for organizations, García-Morales et al., 2012) discovered that transformational leadership influences organizational performance using the dynamic capabilities of organizational learning and innovation. Transferring learning from past project experiences into project management practices used across multiple projects facilitate cross-project improvement (Cacciatori, Tamoschus, & Grabher, 2012). To prevent undermining individual and organizational learning, managers ensure that lessons learned sessions do not result in punitive action.

A significant positive correlation exists between effective communication and job satisfaction, and senior employees possess a willingness to share and transfer knowledge to younger generations (Appelbaum et al., 2012). However, pre-retirees lack the motivation to share and transfer knowledge to younger employees as they approach retirement (Appelbaum et al.). Codification and rich-media strategies have positive effects on internal knowledge transfer and serve as engines for organizations to create a persistent competitive advantage (Ding, Liu, & Song, 2013). McBeath and Ball (2012) identified willingness to share and receive information, transferring explicit and tacit knowledge, and verification of knowledge as five key elements required for successful knowledge transfer from one facility to another. Likewise, Boh, Nguyen, and Xu (2013) argued that trust, cultural alignment, and openness to diversity have a positive influence on the effectiveness of knowledge transfer from one facility to another. Knowledge transfer acts as a mediating variable, competency-based management, learning, information and communication infrastructure, and organizational performance among

organizations (Palacios-Marqués et al., 2013). Furthermore, the combination of knowledge transfer, holistic view, competency-based management, and continuous learning is the key to disseminating knowledge in organizations (Palacios-Marqués et al.). Similarly, in a knowledge-intensive organization, source-recipient model, and model of mutual exchange influence intergenerational knowledge transfer and allow efficient transfer of explicit and tacit knowledge (Harvey, 2012). Kuyken (2012) argued that achieving knowledge transfer and retention requires a deeper understanding of generations and the differentiated knowledge between generations. Hence, organizations must find ways to ensure knowledge transfer between generations and knowledge retention of retiring workers.

Relationship strength has a significant positive impact on cooperative knowledge transfer and external integration capability, but do not influence new knowledge and internal integration capability (Shu-wen & Wen-an, 2013). Furthermore, the internal knowledge integration function has a positive influence on external integration function while external knowledge integration does not have the same impact on internal integration function. Establishing a practice of knowledge transfer that provides opportunities for employees to obtain and provide knowledge on the job encourage individual and organizational learning (Cacciatori et al., 2012). Motivating employees with a high degree of rewards improves the willingness of workers to transfer knowledge (Martín-Pérez, Martín-Cruz, & Estrada-Vaquero, 2012).

Formal evaluation systems that relate to subsidiary knowledge transfer increase the desire of subsidiary organizations to transfer knowledge, subsequently improving the

performance of transferring knowledge (Blomkvist, 2012). In contrast, when a parent organization makes a formal demand for subsidiary organizations to share knowledge without incentives, the demand usually has a negative impact (Blomkvist). Hence, by creating an official evaluation system to measure the performance of knowledge transfer within organizations, managers can identify and eliminate barriers to knowledge transfer. Similarly, in an organization, organizational factors affect the transfer of knowledge differently based on whether the recipient is a parent or subsidiary organization (Chang, Gong, & Peng, 2012). Developing a formal mechanism facilitates knowledge transfer between a subsidiary and a parent organization. However, the frequency of communication between managers in parent and subsidiary organizations enhances the process of knowledge transfer within the two organizations (Chang et al.). A knowledge-based view of knowledge characteristics and barriers and knowledge governance provides an understanding of network organizations seeking effective knowledge transfer strategies in inter-organizational context (Fang et al., 2013).

In a successful transfer of direct knowledge from experts to learners, Guechtouli, Rouchier, and Orillard (2013) found that learners act as intermediaries and constitute additional sources of knowledge. However, in the process of indirect knowledge transfer, Guechtouli et al. found that learners have little influence on the process of individual learning. Interorganizational knowledge transfer is essential to the success of small and medium enterprises (SMEs) performance (Durst & Edvardsson, 2012). Hence, there is a need for SMEs to pursue interorganizational knowledge transfer practices.

Knowledge types and transfer processes are the missing links in the successful

relationship between structural social capital and innovation at the various organizational

levels (Filieri & Alguezaui, 2014). Furthermore, different configurations of social capital

enable individuals and organizations to explore, access, assimilate, and combine different

knowledge types that could lead to improved innovation outcomes. Knowledge transfer

relates positively to innovation (Ko & Tan, 2012). However, the link between knowledge

transfer and innovation varies depending on the interpretation of the operating

environment as potential opportunities or threats (Ko & Tan). To maintain the current

and future well-being of organizations, managers need to create a meaningful

environment for collaboration between the generation of employees and a culture of

knowledge transfer (Harvey, 2012). Building an enabling environment for learning

improves the transfer of explicit and tacit knowledge from one project team to another,

improving organizational learning and performance.

Knowledge transfer is one of the most important components used by

organizations to achieve the status of organizational learning (Harvey, 2012). The

process of knowledge transfer includes interviews/videotaping, mentoring, storytelling,

communities of practice, and training and education (Martins & Meyer, 2012). In

addition, face-to-face interaction is another element often associated with transferring

knowledge successfully (Martins & Meyer). Face-to-face interactions provide the

framework in which individuals can create, retain, and transfer knowledge. Moreover, to

address the risks of potential organizational knowledge loss, managers need to implement

strategies to promote intergenerational knowledge transfer through face-to-face interactions (Martins & Meyer).

Multiple means used by managers to transfer knowledge within organizations include job training, published standards and procedures, online portals, and other websites that provide reference materials (Cumberland & Githens, 2012). Additional means of transferring knowledge, which are less obvious but critical to knowledge transfer include verbal communication, demonstrations, shared exchanges between colleagues, strategic alliance partners, and suppliers (Cumberland & Githens). The ability of organizations to share information and transfer knowledge from one individual or group to another is vital to the success and improving the competitive advantage of affiliated organizations.

Transferring knowledge is difficult, time-consuming, and complex to manage in global organizations according to Cumberland and Githens (2012) because knowledge transfer occurs beyond the corporate entity, into separate organizations that comprise many different partners. Knowledge transfer is difficult in global organizations because geography and size, scope, and degree of business experience typically separate the various subsidiaries (Cumberland & Githens). In most cases, the different subsidiaries have cultures of their own, distinct from the parent organization and other affiliates.

Knowledge Loss

Organizational knowledge loss is the intentional or unintentional evaporation of knowledge accumulated from individuals and collective learning (Daghfous et al., 2013). Additionally, organizational knowledge is the competences acquired and developed by

individuals, evolving into collective learning used to draw distinctions in operational

processes (Daghfous et al.). Furthermore, using knowledge assets and resources

efficiently provides organizations with improved ability to innovate and respond to fast-

changing customer expectations and support vital operational and innovative activities

(Daghfous et al.). Managing knowledge in organizations has become increasingly

important as organizations realize the benefits of using knowledge assets and resources

effectively (Daghfous et al.).

Organizations endeavor to assess the value of potential departing knowledge and

implement strategies to mitigate knowledge loss. Implementing a system for identifying

potential knowledge loss within organizations allows managers to manage effectively the

allocation of resources for capturing knowledge from departing individuals (Jennex,

2014). By capturing knowledge from individuals retiring from an organization or

moving from one organization to another enables the management to retain the

knowledge for organizational learning. One of the main benefits of organizational

learning is the ability of employees to access knowledge within the organization and

employs the knowledge to new projects.

Understanding and managing knowledge loss in manufacturing and service

operations, Daghfous et al. (2013) found that organizations implemented strategies to

retain and diffuse architectural knowledge. Furthermore, organizations improve

coordination among units and develop existing competencies through different

networking strategies to mitigate knowledge loss and increase knowledge retention

(Daghfous et al.). By improving relationships among units, information sharing among

unit managers improves, and unit managers encourage their subordinates to share information with their counterparts. In addition, by sharing and retaining knowledge, an organization improves the ability to compete and improves the bottom line. However, relying solely on standard operating procedures, information systems, and codification of knowledge in databases could undermine knowledge retention and lead to knowledge loss (Daghfous et al.). Hence, managers need to adopt a comprehensive strategy to guide knowledge management efforts and actions effectively. Daghfous et al. indicated that managers require management commitment and drive, and the adoption of integrative strategic approaches to retain knowledge.

Providing insight into the management of knowledge loss, Durst and Edvardsson (2012) indicated that small organizations lack strategies to capture potential knowledge loss. This lack of strategies to sustain intangible resources exposes small organizations to risks of knowledge loss and inability to compete effectively. One of the means of losing knowledge in the professional services industry is when older experts retire. Putting a strategy in place to identify the types of knowledge that an organization can lose when older professionals retire or move to another organization enhances the ability of managers to retain knowledge (Joe et al., 2013).

Retaining knowledge is a challenge in some organizations, as knowledge becomes their primary asset. Especially, when an organization is experiencing high levels of retiring or exit of experts, minimize the loss of valuable knowledge becomes a challenge. To prevent knowledge loss and enhance knowledge acquisition, managers need to develop organizational systems and training to identify potential knowledge loss and

integrate knowledge back into the organization (Hora & Klassen, 2013). However, managers must be careful to ensure they retain best practices and structure the process of retaining knowledge and documenting retained knowledge. Preserving knowledge within organizations is important and implementing a strategy to retain knowledge will enable effective and efficient knowledge retention resulting to less knowledge loss in organizations (Hora & Klassen).

Understanding the essential processes of knowledge integration and timely creation of new knowledge is a solution for critical problems, enhancing the past and present knowledge (Mohd Rodzi, Ahmad, & Zakaria, 2015). Knowledge integration involves identification, creation, assimilation and evaluation to identify core elements necessary for integrating knowledge (Mohd Rodzi et al.). Utilizing the essential processes of knowledge integration increases the speed of knowledge creation by eliminating redundant conventional processes and allowing effective communication among knowledge practitioners.

Similarly, in today's business environment, organizations use downsizing strategy to improve their performance and competitive advantage over competitors. However, many implemented downsizing initiatives by organizations fail to retain critical skills, capabilities, experience, and knowledge (Schmitt et al., 2012). Hence, downsizing without sufficient knowledge capturing strategy in place may lead to deteriorating quality, productivity, and effectiveness (Schmitt et al.). Managers need to implement effective knowledge management strategy to capture, retain, and avoid losing critical knowledge during organizations' downsizing.

Retaining knowledge has become a core element of organizational memory concept, enabling organizations to entrench knowledge within the organization (Schmitt et al., 2012). Organizations have knowledge in human and non-human repositories on specific organizational levels. However, the organizational knowledge retained through individuals is the most valuable source of competitive advantage for organizations and an integral part of the organizational learning process (Schmitt et al.). Some of the human resources practices of capturing and storing knowledge include recruiting, personnel mobility, and job rotation.

Organizational learning enables organizations to process information about their environment and adapt based on acquired knowledge to achieve optimal fit and performance. Through absorptive capacity, organizations acquire and assimilate new information and incorporate the acquired knowledge into corporate knowledge database (Schmitt et al., 2012). Retained knowledge enables a process of sorting and categorizing organizational learning, allowing the application of existing knowledge in new and significant ways in the future (Schmitt et al.). Consequently, retained knowledge influences the interpretation of new knowledge acquired by organizations, leading to organizational learning through permanent behavioral changes (Schmitt et al.).

Lessons Learned

Learning is knowledge or understanding that organizations gain through individuals and collective experience (Carrillo et al., 2013). In a successful project, the experience may be positive while, in a failed project, the experience may be negative. Carrillo et al. indicated that lessons learned are valuable to an organization because

acquired knowledge has a real impact on operations. Furthermore, experiences contribute to organizational development because captured knowledge identifies specific processes that reduce or eliminate potential failures or reinforce positive results (Carrillo et al.). Acquired knowledge provides a competitive advantage to organizations if used appropriately and efficiently. Moreover, knowledge gained overlap with the broader areas of knowledge management and organizational learning, which helps promote innovation depending on organizations' absorptive capacity (Carrillo et al.).

In project-based environments, a common means of identifying improvements and innovations is through lessons learned activities; however, these activities have proved to be a difficult area for organizations to succeed (Carrillo et al., 2013; Jugdev, 2012). Project-based organizations learn from projects through the accumulation of project team's experiences; however, time pressure and the temporary nature of projects often prevent collective learning among the project teams (Pemsel & Wiewiora, 2013). Chirumalla, Johansson, Bertoni, and Isaksson (2012) indicated that when experienced project managers exit an organization, possibility of losing their knowledge exists unless captured and shared among project teams. Capturing lessons learned demonstrates the importance of a social dimension of learning because the control of experience is within individual and organizational context. The problems of disseminating and implementing knowledge within an organization exist due to lack of a system to monitor how project teams are learning from projects and transferring captured learning across the organization (Duffield & Whitty, 2015).

Project managers generate a report of knowledge gained at the end of postproject reviews, which aids project teams to learn from past projects and employ for future projects (Carrillo et al., 2013). Managers used various methods, tools, and processes to capture lessons learned (Carrillo et al.). Similarly, Chirumalla et al. (2012) indicated that organizations used videos to capture knowledge gained, and project managers hold experience in their minds and exchanged information through informal discussions and storytelling. There is a need for organizational leaders to develop continuously new approaches to capture knowledge and improve the process of organizational learning (Duffield & Whitty, 2015). Furthermore, managers can use event-based approaches to improve knowledge integration as part of project learning processes (Duffield & Whitty).

Lessons learned from past projects enhances the success of future similar projects by allowing project managers to identify and mitigate potential risks at the onset of the project (Pemsel & Wiewiora, 2013). Hence, project managers need to capitalize on existing knowledge within the organization and encourage the sharing and transfer of lessons learned to enhance organizational learning and performance (Pemsel & Wiewiora). Similarly, Ivarsson and Gorschek (2012) indicated that project managers use practice selection frameworks to access organizational data and share experiences across projects.

Project managers conduct project reviews and share information and knowledge with project teams (Maluleke & Marnewick, 2012); however, project managers often do not share captured lessons learned within the organizational system. Hence, Maluleke and Marnewick concluded that lack of sharing knowledge within organizations defeats

the purpose of capturing experiences. In support of capturing knowledge, organizations develop training programs to encourage learning and innovation (Morris, 2013).

There are various methods of facilitating organizational learning in different activities (Schulze et al., 2013), and value stream mapping facilitated organizational learning in new product development process through social consciousness and sharing of understanding. Experience accumulation is an important way of sharing knowledge between projects and within the wider organization (Oltra & Vivas-López, 2013). Extending the benefit of organizational learning to improve the competitive position of organizations, project managers used situated learning theory (Jugdev & Mathur, 2013). The situated learning theory strengthens the bridge between project management and workplace learning, enhancing shared learning within and between projects (Jugdev & Mathur).

Project teams rely on (a) face-to-face interactions, (b) telephone, and (c) e-mail for sharing knowledge (Snyder & Lee-Partridge, 2013). Willingness to share and receive information, explicit knowledge transfer, tacit knowledge transfer, and verification are main themes required for successful knowledge transfer (McBeath & Ball, 2012). Labor talent and knowledge sharing are the sustainability link of any industry and enhance organizational learning (Kumaraswamy & Chitale, 2012). Organizational knowledge grows with (a) sharing knowledge through communication, (b) discussions, (c) development programs, and (d) industry-institute interactions (Kumaraswamy & Chitale).

Codification and rich-media strategies have positive effects on internal knowledge transfer and serve as engines for organizations to create a persistent competitive

advantage (Ding et al., 2013). Engineering and high-tech industries use codification effectively as a means of transferring learning to projects (Cacciatori et al., 2012). The relative importance of codification in engineering and high technology industries reflected their collective learning systems, which helps to avoid reinventing the wheel through careful knowledge management (Cacciatori et al.). Project managers develop strategies to identify, acquire, store, transfer, and efficiently use knowledge in individuals because construction professionals base the selection process of construction methods on individual learning (Ferrada & Serpell, 2013).

Sharing lessons learned is critical to the success of organizational learning (Jugdev, 2012); however, organizations often add the practice of capturing learning to the process of project management in response to project failures. Similarly, organizations measure the performance of the process of capturing learning to ensure effective organizational learning. Likewise, project managers share captured knowledge with the project and organizational levels to enhance the organizational learning process (Bartsch et al., 2013). An effective knowledge management strategy encourages knowledge retention and enhances the value of project managers' knowledge. However, Lee, Kim, and Kim (2012) indicated that collaboration, learning culture, top management support, and IT supports have a significant effect on knowledge process capabilities, facilitating the relationship between organizational learning and organizational performance. Eliminating the issues and inconsistencies in the practice of capturing and transferring knowledge in information system projects can improve the outcome (Alhawari, Karadsheh, Nehari Talet, & Mansour, 2012).

IT applications helped hospitality organizations to create, store, transfer, and use tacit and explicit knowledge (Okumus, 2013), enhancing organizational competitive advantage. Culture played an important part in capturing and sharing lessons learned from IT programs (Rowe, 2013), and has the greatest impact on the use of learning to facilitate knowledge sharing for IT program management. A link exists between control culture and ethics of justice (Tuan, 2012). In addition, intellectual capital has an influence on knowledge sharing (Tuan). Lack of sharing knowledge affects learning effectiveness under the condition of explicit knowledge (Wu & Lin, 2013). Managing knowledge effectively is highly dependent on the willingness of the sender to share knowledge (Wu & Lin). An individual's ability could affect organizational performance, resilience, and sustainability when used in combination with an effective adaptation process (Emmons, 2013).

Sharing of knowledge improves individual learning and organizational performance; however, in many instances, project teams often ignore sharing their knowledge even when the organizational practices facilitate knowledge transfer (Connelly et al., 2012). Knowledge transfer occurs primarily through combined formal and informal social networks (Deville, 2012). Hall, Kutsch, and Partington (2012) claimed that project-to-project learning enabled project teams to learn from failed projects and used experiences to the benefit of the success of other projects.

Knowledge sharing motivation and opportunity play mediating roles in the relationship between knowledge governance mechanisms and the knowledge sharing behavior of repatriates (Huang, Chiu, & Lu, 2013). Similarly, knowledge governance

mechanisms have a significant influence on knowledge sharing motivation and

opportunity (Huang, 2013). Appelbaum et al. (2012) argued that employees possess the

willingness to share and transfer knowledge when a correlation between job satisfaction

and efficient communication exists. Furthermore, a negative correlation between

employees and their lack of motivation as they approach retirement enhances the

willingness of workers to share knowledge (Appelbaum et al.).

Knowledge Barriers

Knowledge is information combined with experience, context, interpretation, and

reflection (Wendling, Oliveira, & Maçada, 2013). Additionally, knowledge is a resource

for value creation in organizations and one of the foundations for achieving competitive

advantage (Wendling et al.). Sharing knowledge within organizations is important

because the strategy links individuals and organizational knowledge and encourages the

maintenance of a company database. Nevertheless, sharing knowledge within

organizations faces numerous challenges (Wendling et al.).

Contributing to the understanding of barriers to knowledge sharing within

organizations, Wendling et al. (2013) identified eight common obstacles to knowledge

sharing. First, the ability of an organization to identify the value of new knowledge and

use it properly to improve organizational learning and competitive advantage is a barrier

to sharing knowledge. Second, the relationship between individuals within an

organization and members of different teams is an obstacle to knowledge sharing. Third,

the lack of interaction between knowledge owners and knowledge recipients results in

ignorance, which hinders knowledge sharing. Four, the difficulty of individuals finding

time to share knowledge with their counterparts because of overloaded work hinders knowledge sharing. Five, the lack of common framework among geographically dispersed team members contributes to hindering collaboration between teams.

Six, an organizational structure such as silo-type structures, with people divided into offices, locations, and divisions contributes to the difficulty in transferring knowledge between teams. Team members in silo-type structures tend to focus solely on achieving individual goals, with less concern about the objectives of the organization as a whole. Seven, the value attributed to experts hinders knowledge sharing because experts believe the future of individuals depends on their development as an expert, and hence, struggle to attain or maintain control over knowledge instead of sharing it. Eight, lack of recognition of individuals who learned, shared, and helped team members within and from outside their scope demoralize their morale and hinders the willingness to share knowledge. Nine, distance, time zone, and cultural differences in global teams are barriers to sharing knowledge because of the reduced face-to-face interaction. However, organizations use tools such as intranets, groupware, and knowledge base to encourage sharing knowledge among teams working in different time zones.

Exploring the learning practices within project teams and understanding the learning process and the barriers and challenges surrounding the learning process, Gharaibeh (2012) argued that project managers make repeated mistakes. The mistakes include lack of learning from previous projects and incentive for learning (Gharaibeh). Additional mistakes include lack of documentation of learning and absence of collaborative learning within project teams (Gharaibeh). Offering a new perspective and

an understanding of the interaction and relationships between knowledge sharing barriers, Wendling et al. (2013) identified four main obstacles to knowledge sharing in a software development organization. The barriers include (a) technology, (b) professional skills, (c) cost, and (d) methodology of software development as (Wendling et al.). However, some barriers could be enablers of knowledge sharing (Wendling et al.).

When managers use transaction-based mechanisms to encourage knowledge sharing, the strategy promotes knowledge-sharing hostility (Husted, Michailova, Minbaeva, & Pedersen, 2012). The strategy strengthens individuals' reasons for hoarding and rejecting knowledge, and negatively affects individuals' attitudes towards sharing knowledge about mistakes (Husted et al.). However, the use of commitment-based mechanisms diminishes knowledge-sharing hostility among individuals (Husted et al.). For example, when an organization downsizes, apprehension increases the awareness of managers regarding the problem of knowledge hoarding among survivors. Similarly, Hall (2012) claimed that significant positive correlation exists between perceived loss of knowledge power and actual knowledge sharing behavior. Likewise, Gubbins et al. (2012) stated that converting tacit knowledge has a positive value to organizations. Gubbins et al. identified differences in individual's communication code and information processing preferences as significant challenges in converting and sharing tacit knowledge.

Similarly, Carrillo et al. (2013) identified (a) process, (b) reluctance to obtain external advice, (c) duplication of workload, (d) level of perceived value, (e) internal competition, and (f) legal issues as barriers to capturing lessons learned. Furthering

understanding of knowledge sharing barriers, Amayah (2013) argued that (a) community and normative considerations, (b) personal benefits, and (d) social interaction motivated knowledge sharing. Other factors that motivated knowledge sharing include (a) rewards, (b) organizational support, (c) degree of courage, and (d) degree of empathy (Amayah). Shokri-Ghasabeh and Chileshe (2013) also identified the main barriers to sharing knowledge to include (a) lack of time, (b) resources, (c) clear guidelines, and (d) management support.

Extending organizational learning through knowledge management, Magnier-Watanabe and Benton (2013) identified barriers to knowledge management to include people-related factors such as understanding, intention, and skills to be the largest inhibitors to knowledge acquisition, diffusion, and application. Similarly, Santos, Soares, and Carvalho (2012) found (a) codification process, (b) inadequate information technology, (c) lack of initiative and strategy by the workers, and (d) lack of time and resources as critical knowledge sharing barriers. Peng (2013) claimed that knowledge-based psychological ownership positively affects knowledge hiding. Hence, organizations need to focus on practices that can decrease employees' self-perception of possessing the knowledge to reduce knowledge hiding (Peng). Likewise, Ghosh, Amaya, and Skibniewski (2012) argued that managers require a structured approach to acquiring knowledge for project success and add value to organizational business processes.

In a franchise system, numerous factors contribute to the success of the operations. Successful franchise organizations recognize that knowledge is a shared effort, requiring the employees and management to share tacit knowledge (Cumberland &

Githens, 2012). Cumberland and Githens identified five common barriers to tacit

knowledge transfer in a franchise system. The trust barrier, which is the knowledge

owner's willingness to share information based on their perceptions of recipients as a

friend or rival. The maturation stage barrier is when organizations in the mature stage of

their life cycle are not willing to adopt new ideas that require leaving the old ways of

doing things (Cumberland & Githens). In contrast, organizations in their formative

stages welcome knowledge sharing and are willing to learn new ideas. Communication

becomes a barrier when a franchise organization is not ready to share information with

the parent organization and other franchise organizations. Several factors influence the

willingness of a franchise organization to exchange information with the parent

organization and other franchise organizations, including economic incentive, survivor

mentality, and power struggle. Competition becomes a barrier when a franchise

organization believes that the parent organization or other franchises are competitors,

discouraging sharing of tacit knowledge. The risk of revealing too much information to

other franchises or the parent organization can create suspicion that can hinder

knowledge transfer. Culture is a barrier because the culture of an organization influences

the willingness to employees to transfer or not transfer knowledge to their counterparts in

the parent organization or other franchise organization.

Organizations in a franchise system can leverage the collective mind power in the

franchise system to their advantage by understanding the five common barriers that can

hinder tacit knowledge sharing. If the franchise organizations can minimize the effect of

the obstacles, the outcome can encourage innovation that could lead to new product

ideas, accelerate improvements to operating processes, and reduce turnover (Cumberland & Githens, 2012). Franchising remains a viable business enterprise, and the barriers that limit the transfer of tacit knowledge have not inhibited the growth of the operations. However, addressing the five identified common barriers could optimize the performance of franchise organizations and create greater returns for the partners.

Transition

As demonstrated in the above literature review, Argyris and Schon (1978) theory of organizational learning laid the foundation for much of the research conducted over the last 36 years in the realm of organizational learning. Organizational learning theory is useful in understanding how organizations benefit from capturing lessons learned from projects. Sharing captured knowledge within organizations enhances organizational learning and improves project success and organizational competitive advantage. The literature review covers the historical analysis of the extant literature on the development of organizational learning, and current thoughts on organizational learning through knowledge sharing, lessons learned, knowledge loss, and knowledge barriers. This study addressed the gap of assessing the benefits of conducting postproject reviews to capture learning by exploring the experience of organizational leaders and project managers. The criteria for participation include a minimum of five years project management experience and previous involvement in postproject reviews or other processes of capturing lessons learned.

This section includes the background of the study, the problem statement, the purpose statement, the nature of the research, the research questions, and the interview

questions. Other items covered include the conceptual framework, the operational

definitions, the assumptions, the limitations, the delimitations, the significance of the

study, the review of the professional and academic literature, and the transition and

summary. Section 2 includes the extension of the purpose of the study, the role of the

researcher, the participants, the research method and design, the population and sampling,

and the ethical research. Additionally, Section 2 covers the data collection instruments,

the data collection technique, the data organization technique, the data analysis, the

reliability and validity, and the transition and summary. Section 3 includes the

presentation of findings, the application to professional practice, the implications of

social change, the recommendations for action, the recommendations for further research,

the reflections, and the summary and study conclusion.

Section 2: The Project

Successfully completing a project within budget, on schedule, and meeting

clients' expectations is vital to the success of project-based organizations. Capturing

lessons learned and applying them to projects reduces or eliminates repeating same

mistakes, and project failure (Jugdev, 2012). However, Jugdev indicated that project

teams often do not capture lessons learned because of lack of time between projects.

Consequently, project teams lose significant knowledge when a project ends and the

members move on to the next project without reviewing the project successes and failures

(Rezania & Ouedraogo, 2013). Jugdev posited that project teams' lack of learning from

mistakes contributed to increased project costs, extended schedules, considerable rework,

and costly mistakes. A postproject review is one of the processes of evaluating the

success and failure of projects to capture lessons learned, learn from mistakes, and

improve on successful practices (Jugdev, 2012).

Purpose Statement

The purpose of this qualitative case study was to explore how organizational

leaders use postproject reviews to prevent project managers from repeating the same

mistakes and increasing cost and time overruns and project failure. I interviewed one

project sponsor and five project managers involved in the management of completed

projects. I studied completed projects executed in the New York Metropolitan area to

gather the data for this study. This study improved business practices by presenting the

benefits and impact of capturing and sharing lessons learned on project success.

Additionally, the presentation of the findings showed the potential social impact on the

society and the bottom line of project-based organizations with less costly mistakes and more successful projects.

Role of the Researcher

In qualitative research, the role of the researcher is to select the participants, review documents, and conduct interviews to collect the data (Elo et al., 2014). As the main instrument for collecting data in this qualitative case study research, I selected and interviewed participants to gather the data. In qualitative research, the researcher is the central research instrument and the main person in obtaining data from participants (Roulston & Shelton, 2015). Because researchers are the main instrument, they facilitate interaction and flow of communication with participants and build trust to encourage participants to share their experiences (Roulston & Shelton). Likewise, in a qualitative research study, the researcher is the primary tool for collecting and analyzing data (Roulston & Shelton). I selected participants for participation in this study through face-to-face interaction and over the phone based on their role in the management of the completed project under study. I used face-to-face and telephone open-ended interviews with organizational leaders and project managers to collect the data for this study. Using open-ended interviews provide the opportunity for participants to explain their experiences regarding the phenomenon under study with little or no limitations as imposed by closed questions (Wilson, 2012).

My relationship with the topic and area of this study is over 28 years of project management of capital construction and renovation projects. My relationship with the participants was mainly as professional colleagues. My beliefs and values reflect in the

topic of this study, which is the "Benefits of Conducting Postproject Reviews to Capture Lessons Learned." My worldview supported the conduct of postproject reviews to capture lessons learned, and this support of one side of the argument is a potential bias in this study. Separating my personal worldview from the topic or participants was difficult as the key instrument in the collection of data (Rowley, 2012). It was necessary to collect the data for a qualitative study in a natural setting where participants experience the phenomenon under study and feel comfortable produces rich data (Englander, 2012).

The qualitative case study research for this study was prone to bias because I was the key instrument of collecting the data. To mitigate my personal bias in this study, I identified and stated my position, experience, biases, and assumptions that might have influenced the interpretation of the findings. Dierckx de Casterlé, Gastmans, Bryon, and Denier (2012) pointed out that researchers can use triangulation to validate the results of a qualitative study to mitigate potential bias.

Potential ethical issues exist in qualitative case study research, and researchers need to anticipate and establish strategies to address the issues. Addressing ethical issues in a study protects participants, develops trust with participants, and promotes the integrity of the research (Englander, 2012). To address the ethical issues in this study, I submitted an application for Walden University institutional review board approval and obtained permission from participants. In addition, per Belmont Report (U. S. Department of Health and Human Services, 1979), I obtained informed consent from participants, assessed risks and benefits to participants, and was impartial in selecting participants. Furthermore, I complied with the Belmont Report basic ethical and

principles of human research subjects, which include (a) respect for persons, (b) beneficence, and (c) justice (U. S. Department of Health and Human Services, 1979). In respecting participants, I treated each participant as an autonomous agent and protected participants with diminished autonomy from harm. In complying with the principle of beneficence, I ensured no harm to the participants. I also maximized possible benefits to participants and minimized potential harms to participants. In complying with the principle of justice, I treated each participant equally and ensured no injustice to any participant.

At the start of the study, I contacted the participants, disclosed the purpose of the study, and informed them that participation was voluntary. I identified and respected the norms of the participants and obtained appropriate consent from the participants. During the data collection, I built trust with the participants and discussed the purpose and use of the study with them. I avoided leading questions and did not share my views during the interview. During the analysis of the data, I avoided siding with participants by reporting multiple perspectives, including contrary findings. I respected the privacy of the participants by assigning aliases and developed a composite profile for each participant. I reported reliable data, interpreted the data well, reached reasonable conclusions, did not plagiarize, and communicated in clear, appropriate language. I provided copies of the report to participants after publishing the study and did not duplicate or use the same materials for more than one publication.

Participants

The participants for this qualitative case study research included one project sponsor and five project managers involved in the management of completed projects. A small sample size is acceptable in a case study research (Molenberghs et al., 2014). Similarly, a small sample size in a case study research is appropriate to obtain the required information from a selected case project or multiple-case projects (Yin, 2014). The proper sampling size of a qualitative study depends on factors such as the quality of data and scope of the study (Dworkin, 2012). Other relevant factors include the nature of the topic, the amount of useful information obtained from each participant, and the qualitative method used (Dworkin).

The eligibility criteria for the participants included having a minimum of 5 years of project management experience and participation in the process of capturing lessons learned. Experts build up experience gradually with continuous working and training to reach peak performance (Hutchinson, Sachs-Ericsson, & Ericsson, 2013). Likewise, achieving individual peak expert performance relates to personality, interest, and motivation (Hutchinson et al.). Having the experience and competence to answer interview questions should be part of the prerequisites for participants' participation in a study (Nathan, Braithwaite, & Stephenson, 2014). I selected the participants based on their involvement in completed projects in the New York metropolitan area.

Before the interview, I sent a letter of invitation to each participant, which explained the purpose and intent of the study and a consent form. The consent form contained a statement that participation in the study was voluntary and participants could

decide not to continue participation at any time during the interview process. The consent form also contained a statement about the protection of the participant's name to maintain confidentiality.

I used purposive sampling to select the participants for this study. Purposive sampling is appropriate to collect the data for this study since potential participants must meet certain criteria to be eligible (Ajjawi & Higgs, 2012). The criteria included a minimum of 5 years of project management experience and prior participation in postproject reviews or processes of capturing lessons learned. The intent of this qualitative case study research influences the use of purposive sampling approach, which enhances the understanding of information-rich cases (Palinkas et al., 2013). Accordingly, I selected participants for this study using purposive sampling, which allowed in-depth understanding and a good description of the projects.

The length of the interview was 30 minutes. Granot, Brashear, and Motta (2012) stated that the duration of a qualitative study interview should be sufficient for the participants to explain their experiences regarding the phenomenon under study. Similarly, the length of an interview in qualitative research should allow participants to give an in-depth account of their experiences concerning the phenomenon under study (Knudsen et al., 2012). The appropriate duration for conducting interviews is not definite because the length of an interview depends on characteristics such as the interviewer, interviewee, time, location, and questions (Byrne, Brugha, Clarke, Lavelle, & McGarvey, 2015). Moreover, Byrne et al. indicated that interviews with participants are short and often last for 45 minutes in length. In contrast, Ostrander (1993) indicated that interviews

typically last for an hour and a half. In a similar study, Stephens (2007) found that an average interview could last for 90 minutes with significantly varied lengths from one interview to another.

I contacted participants in person and over the telephone and followed up with emails and phone calls. Individuals respond well when approached as potential participants for a study directly and through personal networks (Smith, 2012). I outlined the purpose of this research, layout of the interview process, and indicated that the interview process was subject to change based on participants' preferences. To establish good working relationship with participants, I discussed the purpose of the study, my background, and interest in the topic from the onset.

Additionally, I discussed conducting the interviews in the participants' offices or locations preferred by the participants or over the telephone. Byrne (2015) suggested that before an interview, the process should be as transparent as possible, and participants should have all the information relevant to the study. The information should include the researcher, research, interview, data, and findings (Byrne). Researchers should discuss and address potential ethical issues with participants and the willingness to take responsibility for any ethical issues (Halse & Honey, 2014). Researchers may gain participants' trust and willingness to participate in a research study when they are willing to take responsibility for potential ethical issues (Halse & Honey.).

Research Method and Design

Qualitative research is the study of a social or human problem through variation in human meaning, understanding, conceptions, and experiences of a particular

phenomenon (Åkerlind, 2012). Researchers use qualitative research method to describe

the essence of participants' experience of a phenomenon, using the research questions to

solicit the conscious experience of participants (Maxwell & Henriksen Jr., 2012).

Furthermore, qualitative research focuses on understanding rather than predicting or

controlling phenomena (Timmermans & Tavory, 2012). Andriopoulos and Slater (2013)

stated that conducting research in a natural setting and relying on the researcher as the

key instrument for collecting data are part of the characteristics of qualitative research

method. Additional characteristics include focusing on participants' perspectives,

meanings, and multiple subjective views and using various methods of collecting data.

Further characteristics include using inductive and deductive complex reasoning to

organize data, involving emergent and evolving the design. Other features include

reflecting and interpreting researchers' background and presenting a holistic, complex

picture of the problem under study. The major factors that influence the decision to use

the qualitative research method include the purpose of the study and potential research

questions (Andriopoulos & Slater). Other factors include literature on the topic, research

design, and contributions of the researcher (Andriopoulos & Slater). The qualitative

research method provided the opportunity to explore the experience of organizational

leaders and project managers regarding the conduct, benefits, and impact of postproject

reviews on project success. To accomplish the goal of this study, I used inductive and

deductive data analysis to generate themes from participants' responses.

Research Method

The qualitative research method allows studies in a real-world setting (Houghton et al., 2013). Research environment helps to establish an understanding of participants in research settings and reduces bias (Houghton et al.). Houghton et al. indicated that a qualitative methodology focuses on participants in the choice of research settings, allowing participants to have a voice in the research process. Additionally, qualitative methodology empowers participants, a consideration that is often lacking in quantitative methodology (Nind, Wiles, Bengry-Howell, & Crow, 2012). Furthermore, a qualitative methodology allows socially constructed research patterns to emerge from participants' responses (Houghton et al.).

A qualitative method is appropriate for this study because the focus of the study is about exploring organizational leaders' and project managers' experience and perceptions regarding capturing lessons learned, rather than conducting an experiment of the practice. The objective of this study aligns with exploring and understanding the personal experience of individuals regarding a common practice (Maxwell & Henriksen Jr., 2012). Moreover, the quantitative research method uses closed-ended questions to collect data and does not offer the use of open-ended questions that is suitable to collect the data for this study. Covell et al. (2012) used closed-ended questions to gather the data for the quantitative research survey and open-ended questions to obtain the data for the qualitative research interview in a descriptive cross-sectional, concurrent mixed-methods design study. Qualitative research uses open-ended questions to provide opportunities for

participants to explain their personal experiences of a phenomenon with no limitations as imposed by closed questions (Covell et al.).

Research Design

I used a case study research approach for this study to analyze completed projects to illustrate the benefits of applying captured lessons learned to projects. Moreover, the analysis of participants' responses regarding the completed projects provided me with an in-depth understanding and description of the benefits of applying captured lessons learned to projects. Yin (2014) noted that the more individual case studies, the less the depth in any single case because the study of more than one study dilutes the overall analysis of the study. The intent of a qualitative case study research approach is to obtain an in-depth description and analysis of a case or multiple cases of an event or activity as an illustration (De Massis & Kotlar, 2014). Van de Glind, Heinen, Evers, Wensing, and Van Achterberg (2012) indicated that a case study approach allows the exploration and rich description of the relevant themes of an event or events. Likewise, a case study research approach allows comparisons of activities in diverse settings (Houghton et al., 2013).

Compared to case study research, the use of a phenomenological research approach in a study offers the opportunity to observe personal experiences of a selected group of participants through patterns regarding a phenomenon (Osborn & Smith, 2015). Additionally, a phenomenological research approach allows researchers to examine, uncover, and understand participants' views and opinions regarding a phenomenon (Tufford & Newman, 2012). Furthermore, phenomenological research enables the

exploration of personal experiences of individuals or groups who have shared a common phenomenon through interviews and focus groups (Rennie, 2012). A phenomenological design was not suitable for this study because this study was not about the lived experience of a phenomenon.

The objectives of other qualitative research approaches, which include grounded theory, ethnography, and narrative approaches did not align with the intent of this study as the goal of a case study research approach. For example, the grounded theory approach seeks to gather and compare data to determine similarities and differences, with the researcher focusing on developing theory from the participants' responses (Thornberg, 2012). The intent of grounded theory is not to give an in-depth description and analysis of a case or multiple cases of an event under study (Thornberg). An ethnography research approach is suitable for exploring the cultural characteristics of selected groups of individuals in understanding the social interaction within groups (Kriyantono, 2012).

In contrast, the use of grounded theory research approach is appropriate in developing a theory of a process or an action grounded in the perceptions of individuals (Thornberg, 2012). The use of ethnography research approach is suitable for the study of a cultural sharing group and collect data over a prolong period (Murthy, 2013). The use of narrative research approach is appropriate in exploring the lives of individuals and telling the stories about the studied individuals (Hards, 2012). However, the focus of this study is not to develop a theory about a process, study a shared culture among groups, or explore the lives of participants to tell stories. The focus of this study is to explore the

experience of organizational leaders and project managers regarding the benefits of using captured lessons learned to improve project success.

To ensure data saturation, I looked for repetition of related themes in the statements of participants during sampling and data analysis. Related themes included benefits of conducting postproject reviews or other processes to capture lessons learned and the positive impact of captured learning on project success. Other themes included conducting postproject reviews or other processes to capture lessons learned to be a waste of time and captured learning not having an impact on project success. Dworkin (2012) posited that researchers reach data saturation when no new themes, findings, concepts, or problems are evident in the data in subsequent interviews. A researcher reaches data saturation point when the data collection process no longer offers any new or relevant data (Palinkas et al., 2013). The sample size for a qualitative research is sufficient when additional interviews or focus groups will not result in new information, achieving the data saturation point (Sargeant, 2012).

Population and Sampling

The target population for this study included project management professionals who have managed or managing projects in the New York metropolitan area. The sampling included three male and three female project management professionals who possessed more than five years project management experience and had participated in previous postproject reviews or other processes to capture lessons learned. Spengler and Pilipis (2015) inferred that professionals can achieve peak performance with 10 years of knowledge and experience gradually over time with repeated and constant training and

preparation. I used a purposive sampling method to identify and select participants for

this study based on the years of project management experience possessed by the

participants. In qualitative research with limited resources, purposeful sampling is useful

and widely used to identify and select participants to obtain rich information related to

the phenomenon under study (Palinkas et al., 2013). Klassen, Creswell, Plano Clark,

Smith, and Meissner (2012) indicated that purposively sampling is suitable for selecting

participants who have knowledge about a phenomenon and can explain their experience.

In addition, purposive sampling notes the availability and willingness of participants to

participate, and participants' ability to communicate their experiences about an event in a

reflective manner (Klassen et al.). Mealer, Jones, and Moss (2012) successfully used

purposive sampling in qualitative research to identify and recruit Intensive care unit

nurses (ICU) and ICU nurses diagnosed with the posttraumatic stress disorder. Hence,

using purposive sampling to identify and recruit organizational leaders and project

managers to participate and share their experience regarding the process of capturing and

applying lessons learned is appropriate.

The sample size for this qualitative case study research is six. Molenberghs et al.

(2014) indicated that a small sample is perfectly acceptable in a case study. Similarly,

small sample size in a case study is appropriate to obtain the required information from a

selected case project or multiple-case projects (Yin, 2014). The proper sampling size of a

qualitative study depends on factors such as the quality of data and scope of the study

Dworkin (2012). Other relevant factors include the nature of the topic, the amount of

useful information obtained from each participant, and the qualitative method used (Dworkin, 2012).

In qualitative research, researchers achieve data saturation when no new themes, findings, concepts, or problems are evident in the data in subsequent interviews (Dworkin, 2012). I conducted six interviews with one project sponsor and five project managers regarding conducting a postproject review to capture lessons learned from completed projects. I analyzed the data for evidence of saturation by looking for (a) additional information from participants' responses, (b) emergence of new themes, and (c) possibility of further coding. In a case study research, data saturation means reviewed data shows no new themes are possible from more interviews, and the researcher believes more interviews will not produce new data (Dworkin, 2012). Similarly, in qualitative research, researchers will continue sampling until the data generates no new information, at which point there are fewer surprises and no more emergent patterns in the data (O'Reilly & Parker, 2012). Using data saturation well in qualitative research produces adequate and quality data (Bekhet & Zauszniewski, 2012).

The participants for this case study research are one project sponsor and five project managers who have more than five years project management experience and prior participation the process of capturing lessons learned. Professionals acquire experience with continuous development, reaching peak performance by 10 years (Spengler & Pilipis, 2015). Individual's personality, interests, and motivational factors contribute to the achievement of experts' peak performance (Hutchinson et al.). Similarly, having the experience and competence to answer interview questions should be

part of the prerequisites for participation in qualitative research (Elo et al., 2014).

However, these requirements and the logistics of undertaking a qualitative study might

limit the available pool of participants (Elo et al.). The participants of this study involve

project sponsor and project managers who were currently managing projects or have

managed projects in the New York metropolitan area.

The interviews were semistructured face-to-face and over the telephone. To

pursue and maintain a collaborative and clear dialog, the locations of the face-to-face

interview included participants' offices and other office-structured locations preferred by

the participants. Accommodating participants' preference for interview locations helps to

improve participants' involvement and reduces bias (Hutchinson et al.). Allowing

participants to have a say in the setting of research builds trust and empowers participant

(Lunnay, Borlagdan, McNaughton, & Ward, 2014). Furthermore, involving participants

in the research process allows socially constructed research patterns to emerge from

participants' responses (Palinkas et al., 2013).

Ethical Research

Ethical issues arise in various forms during research studies. To achieve a

balanced ethically approached research, researchers must respect participants, and

provide reliable results with minimal harm to participants (Mikesell, Bromley, &

Khodyakov, 2013). Furthermore, researchers need to provide accurate research findings

(Mikesell et al.). Similarly, researchers should anticipate potential ethical issues that may

arise during research studies and consider the implications and effects of the study on

participants, research sites, and potential readers (Damianakis & Woodford, 2012).

Hodges and Stead (2012) posited that researchers must protect the integrity of their research studies and research participants, and guard against any potential misconduct and impropriety. Common ethical issues that apply to qualitative research include personal disclosure and authenticity and credibility of a research report (Bell & Davison, 2013). Furthermore, Bell and Davison noted that the role of researchers in cross-cultural contexts and personal privacy through forms of Internet data collection are common ethical issues.

My views supported the topic of the study, which is exploring the benefits of conducting postproject reviews to capture lessons learned and the impact on project success. To limit the bias of my views, I collected the data in a natural setting where the participants experience the projects for this study and feel comfortable. In addition, I interviewed professionals involved in project management to obtain valuable in-depth understanding and description. Furthermore, I allowed participants' descriptions to drive the data collection and development of the themes. Moreover, I used best practices to collect the data and validated the findings using member checking.

I also stated my position, experience, biases, and assumptions that might influence the interpretation of the study findings. As the key instrument and an essential part of a qualitative research, researchers' preconceptions about research topics could influence how data are gathered, interpreted, and presented (Tufford & Newman, 2012). To mitigate harmful effects of assumptions that may taint the process of qualitative research, researchers need to set aside their pre-existing views about the research topic (Tufford & Newman).

Throughout the phases of a qualitative research process, researchers need to consider, anticipate, and plan how to address potential ethical issues that may arise (Fisher, 2012). Researchers talk about their background and experiences as they relate to research topics and may influence the interpretation of research findings to address potential ethical issues in qualitative research (Fisher). Furthermore, to address ethical issues, researchers need to interpret research findings from the voices of participants (Fisher). In addition, researchers should reciprocate participants' time and efforts toward a study by respecting participants' privacy and right to withdraw from a study and not place them at risk (Fisher). I reviewed potential ethical issues as they apply to the different phases of this study.

Before conducting the research, potential ethical issues include seeking approval for data collection from Walden University Institutional Review Board (IRB) (McCormack et al., 2012). I addressed this issue by not proceeding with collecting data for the study until I received written approval along with an approval number (08-14-15-0373821) from IRB. I included a copy of the approval and approval number in the final copy of the study. Another potential ethical issue is obtaining consent from participants (McCormack et al.). I addressed this issue by sending a consent form (Appendix A) to each participant, which served as an agreement between the participants and me, the researcher. I stated in the consent form that participation was voluntary and would not place participants at any undue risks. Furthermore, the statement indicated that participants could withdraw in person, by phone, text, or email at any time before or during the interview without explanation.

At the start of the study, potential ethical issues include disclosing the purpose of the study and not pressuring participants into signing consent forms (Thorpe, 2014). In addition, respecting the norms of participants is a potential ethical issue (Thorpe). I addressed these ethical issues by contacting potential participants and informed them of the general purpose of the study. In addition, I told participants that participation was voluntary, and they did not have to sign the form. Furthermore, I identified the norms of participants such as cultural, religious, and gender, and respected them. At this phase of the study, the procedure for participants to withdraw from the study was to call me by phone that they were no longer interested in participating in the study. The participants also had the option to send a text or an email to communicate their intention about the interview. Participants did not need to give any reasons or explanation for withdrawing. In addition, participants could withdraw their participation in person without providing any reasons or explanation for withdrawing. I would not ask why any participant is withdrawing or put any undue pressure on them not to withdraw.

During the collection of data, potential ethical issues include respecting participants' preferred interview locations and avoiding misleading participants (Wang, 2013). Furthermore, not giving back to participants to appreciate their participation is a potential ethical issue (Wang). I addressed these ethical issues by building trust with participants and disclosing the extent of the interview. Additionally, I discussed the purpose of the study with participants and the usefulness of the data. Furthermore, I avoided leading questions and did not share personal views during interviews. As an incentive and appreciation for participation, I promised a copy of the final study to any

interested participant. At this phase of the study, the procedure for participants to withdraw from the study was to stop me at any time during the interview session and indicate they were no longer interested in continuing participating in the study. Participants would not need to give any reasons or explanation for withdrawing at this phase. I would not ask why any participant is withdrawing at this stage of the study or put any undue pressure on them not to withdraw.

During data analysis, potential ethical issues include avoiding taking side with participants and avoiding disclosure of only positive results (Damianakis & Woodford, 2012). In addition, respecting the privacy of participants is a potential ethical issue (Damianakis & Woodford). I address these ethical issues by reporting multiple perspectives and contrary findings. In addition, I assigned aliases to participants and developed composite profiles for them. The names of participants and their organizations remained confidential during and after the interview process.

At this phase of the study, the procedure for participants to withdraw from the study includes a phone call or a text or an email to indicate they do not want to continue participation in the study. In addition, participants can request the destruction of their responses and not to include them in the study. Participants would not need to give any reasons or explanation for withdrawing. In addition, participants can withdraw their participation verbally in person without providing any reasons or explanation for withdrawing. I would not ask why any participant is withdrawing or put any undue pressure on them not to withdraw.

During data reporting, potential ethical issues include misrepresenting data and findings and plagiarizing (Frechtling & Boo, 2012). Furthermore, avoiding disclosure of information that could harm participants and communicating in clear, appropriate language are potential ethical issues (Frechtling & Boo). I addressed these issues by reporting reliable data and findings and used APA (2010) guidelines to cite peer-reviewed sources used in supporting the findings. Additionally, I used a composite profile to protect the identity of participants. Furthermore, I used language appropriate for the study audiences. At this phase of the study, the procedure for participants to withdraw from the study would be to write me a letter of withdrawal; send an email or text, indicating that they were no longer interested in participating in the study and that I should discard their responses and not include them in the study. I would need participants to write me a letter of withdrawal or send an email or a text to withdraw during the data-reporting phase to document their decision to withdraw. Participants would not need to give any reasons or explanation for withdrawing. However, I would honor participants' withdrawal at this phase without asking why participants are withdrawing or put any undue pressure on them not to pull out if I have not printed the findings for the study.

Potential ethical issues after publishing the study include sharing the data with participants and showing proof of compliance with ethical issues and lack of conflict of interest (Frechtling & Boo). I addressed these ethical issues by providing copies of the study to participants. Furthermore, I disclosed potential beneficiaries of the study. To protect the confidentiality of participants, I would maintain the data for five years on my

personal computer, protected with a password, and on a flash drive, kept in a secured

drawer with a lock. Anticipating and addressing potential ethical issues that may arise in

this study is to protect participants, promote the integrity of the research, and guard

against misconduct and impropriety that may reflect on participants' organizations.

Data Collection Instruments

The data collection for this study involved gaining permission from Walden

University IRB and participants, sampling participants, recording and storing data, and

anticipating potential ethical issues. In collecting the data for this study, I conducted

face-to-face and telephone interviews with one project sponsor and five project managers.

The participants possessed more than five years project management experience and prior

participation in postproject reviews or processes for capturing lessons learned. The

interview questions were six open-ended questions. I recorded the interviews, analyzed

the data, transcribed the data, and documented the data at the end of each participant's

interview. The interview protocol (Appendix B) included the purpose of the study, which

I read to participants and have participants sign the release form before starting the

interview to ensure confidentiality. In addition, the protocol included statements that I

would audiotape the interview and assign unique numbers to identify each interview data.

I wrote the label assigned to each participant on top of the interview sheet. Furthermore,

the protocol included the questions and potential follow-up questions for the participant

to elaborate on the responses. Finally, the protocol included a statement about thanking

the participant for participating in the interview.

In a qualitative study, the researcher is the key instrument and an essential part of the data collection (Tufford & Newman, 2012). Likewise, the researcher obtains data from participants, facilitates the flow of communication, and sets participants at ease as the key person in qualitative research (Roulston & Shelton, 2015). Researchers widely acknowledged the level of involvement of a researcher in qualitative interviewing and as the primary instrument in semistructured or unstructured qualitative interviews (Pezalla, Pettigrew, & Miller-Day, 2012).

I employed member checking to enhance the reliability and validity of the data. I sent the themes generated from data analysis and my interpretations of participants' responses and conclusions to all participants to seek their views on the accuracy and credibility of the findings compare to their answers. Member checking is an opportunity to share qualitative research findings with participants to enhance research credibility and participant involvement (Myburgh, 2014). Similarly, Elo et al. (2014) stated that member checking is an analytical technique for establishing credibility for qualitative research findings. Likewise, Brandburg, Symes, Mastel-Smith, Hersch, and Walsh (2013) indicated that member checking provides an opportunity to assess the accuracy of representing participants' subjectivity and validated findings. In contrast, Harvey (2015) claimed that there is a lack of concrete description of member-checking and sample of the procedures and processes in the research literature. In addition, Harvey questioned whether member checking is appropriate and sufficient as an ethical procedure for a study in which people discussed important formative and critical life experiences. However, the advantage of using member checking includes giving participants the

opportunity to correct errors and challenge interpretations perceived to be wrong

(Brandburg, 2013). In addition, providing an opportunity to participants to volunteer

additional information that may be stimulated by the playing back process is an

advantage (Elo et al.). Furthermore, providing an opportunity to participants to assess the

adequacy of the data and preliminary findings, as well as confirming aspects of the data,

is advantageous (Brandburg).

Data Collection Technique

The data collection technique used in this qualitative research is personal,

semistructured interview. I used a semistructured interview to explore the benefits of

conducting postproject reviews to capture lessons learned to improve project success

from the experience of project sponsors and project managers. I conducted four personal

face-to-face and two telephone interviews, with six predetermined open-ended questions

with one project sponsor and five project managers who have more than five years

project management experience and prior participation in postproject reviews. I recorded

the interviews, listened to the recordings, and transcribed the data to capture participants'

responses accurately. Furthermore, I documented each participant's data at the end of the

interview. I transferred the recorded interviews to my computer and stored them in a

password-protected folder. In addition, I transferred another copy on a flash drive and

stored the flash drive in a drawer with a lock at my house.

The proposed semistructured interview process for this study is an effective means of

collection data in qualitative research. Semistructured interview produces in-depth

information regarding the phenomenon under study by exploring the experiences of

individuals regarding the phenomenon (Rowley, 2012). Chin, Evans, and Choo (2015)

posited that using semistructured interviews to explore the experiences of individuals

who are willing to share their information is an effective means of collecting data for

qualitative research. Semistructured interview supports the research participants' choice

of using a flexible research medium such as Skype, allowing researchers to reap the

benefits of traditional face-to-face interviews in qualitative research (Hanna, 2012).

Similarly, Doody and Noonan (2013) collaborated the use of semistructured interviews in

obtaining psychiatric nurses' reflections on participating in clinical supervision groups.

Using semistructured interviews to collect the data, that findings indicated that

small business owners naturally plan, monitor, and control their working capital in the

absence of structured systems (Orobia, Byabashaija, Munene, Sejjaaka, & Musinguzi,

2013). In addition, researchers use semistructured interview often because it is efficient

and a convenient means of gathering information (Orobia et al.). Furthermore, in a

semistructured interview, researchers can modify the style, pace, and order of questions

to obtain the fullest responses from interviewees (Orobia et al.). Similarly, Ward, Gott,

and Hoare (2015) used semistructured interviews to collect data and concluded that using

the telephone as a tool to gather data in qualitative research is as valuable as the

traditional face-to-face tool.

The semistructured interview is popular because of its usefulness to gain insight

and context and describe researchers' experience of the study topic (Doody & Noonan,

2013). In addition, semistructured interview enables researchers to develop a rapport

with participants and gives researchers the opportunity to observe as well as listen

(Doody & Noonan). Furthermore, a semistructured interview allows researchers to probe participant's responses and seek further clarification, and enables participants to seek clarification of ambiguous questions, and give detail answers (Doody & Noonan). The disadvantages to the use of semistructured interview include participants perceiving the interviews as being intrusive and time-consuming in arranging and conducting interviews (Doody & Noonan). Additional disadvantages include traveling to interviews' locations, post interview transcribing of interview recordings, and analyzing the data (Doody & Noonan). Other disadvantages include the high cost of interviews and participants' desire to create a good impression and please the researcher (Doody & Noonan).

I used member checking to enhance the reliability and validity of the data. To use member checking, I sent the themes generated from the interview data, my interpretations of the data, and conclusions to all participants to seek their views on the accuracy and credibility of the findings compare to their responses. Conducting member checking provides the opportunity to share findings with participants, enhancing the research credibility and participant involvement (Harvey (2015). In addition, member checking is an analytical technique for establishing credibility for qualitative research findings (Elo et al., 2014). Furthermore, member checking provides an opportunity to assess the accuracy with which a researcher has represented participants' subjectivity and validated the findings (Brandburg et al., 2013).

Data Organization Technique

Organizing data in qualitative research consists of analyzing and interpreting the data (Maxwell & Henriksen Jr., 2012). In qualitative case study research, data

organization involves identifying non-repetitive and non-overlapping statements in interview transcripts and creating textural and structural descriptions of participants' experiences (Maxwell & Henriksen Jr.). The size of the data from six project management professionals' interviews for this study was significant. Hence, for efficient management of the data, I used HyperRESEARCH, a computer-assisted qualitative data analysis software (CAQDAS) program to organize the data into files. An hour of an interview could generate 15–30 pages of text; hence, qualitative data could be significant (Gale, Heath, Cameron, Rashid, & Redwood, 2013).

CAQDAS program is efficient and faster in organizing and analyzing large data compare to analyzing data manually (Cope, 2014). Gale et al. (2013) inferred that CAQDAS programs allow researchers to summarize large data and simplify the analysis, retaining the meaning of participants' responses. Recording, storing, indexing, sorting, and coding significant qualitative data with CAQDAS enhances the reliability and credibility of the findings (Fielding, Fielding, & Hughes, 2013).

I sorted and arranged the data into different themes based on collective responses from participants. As researchers sort through data, they seek the essence as well as variations of participants' experiences regarding the phenomenon under study (Gill, 2014). Likewise, sifting and arranging information obtained from interview transcripts, field notes, and other collected materials increase researchers' understanding of data and enable an excellent presentation of findings (Kolb, 2012). Similarly, summarizing data into manageable units and coding information are integral parts of the data analysis process and helps researchers in interpreting data from participants' views (Malterud,

2012). I stored the data in a password-protected folder on my personal computer, and on an external flash drive, stored in a private locked drawer in my house. I would store the data for five years.

Data Analysis

Data analysis is the process of analyzing data and interpreting the meanings from participants' experiences (Elo et al., 2014). According to Gale et al. (2013), data analysis involves organizing and preparing data and obtaining a general understanding and reflecting on the overall meaning. In addition, data analysis involves coding the data and generating meaningful themes (Gale et al.). Furthermore, data analysis involves representing the data and interpreting the meaning of the data (Gale et al.). Yin (2014) recommended the steps of data analysis to include (a) transcribe interviews, (b) read transcribed notes to get the general meaning of the data, (c) code the data, arranging them into manageable themes, and (d) interpret the meaning of the case study findings.

Three main processes of data analysis in qualitative research include (a) data organization, (b) coding and generating themes, and (c) representing the data (Orobia et al., 2013). Similarly, Vaismoradi, Turunen, and Bondas (2013) explained that data analysis includes transcribing and obtaining the sense of the data, generating codes and creating themes, and reporting the findings. Likewise, Parkinson, Eatough, Holmes, Stapley, and Midgley (2015) described data analysis as a process of transcribing data, developing and grouping codes, and interpreting and presenting findings. I employed three steps of data analysis, which included (a) data organization, (b) coding and generating themes, and (c) representing the data for this study.

First, to organize the data, I used HyperRESEARCH program to upload the interviews' recordings to my computer and created data files for each interview tapes. I assigned a label to each interviewee and saved the data files with the corresponding interviewee's name. I labeled the first interviewee as participant 'A', the second interviewee as participant 'B', and continued in the same format. To ensure accuracy and credibility, I uploaded each interview recording and created a file immediately after the interview. I interviewed six participants, created corresponding files, and labeled them appropriately.

Second, to code and generate themes, I used HyperRESEARCH program to code the data and created themes. To code the data, I read the data multiple times and took notes to understand the perspectives of the participants. Coding data obtained from interviews involve (a) open coding, (b) axial coding, and (c) selective coding (Hartman & Conklin, 2012). To generate themes, I used HyperRESEARCH program to identify statements from participants' responses that relate to the phenomenon of conducting postproject reviews. I developed the identified relevant statements and categorized them into five themes, which include: (a) effective lessons learned (b) capturing lessons learned, (c) benefits of lessons learned, (d) barriers to postproject review, and (e) leadership support.

Third, representing the data include interpreting the themes and presenting the findings. To ensure reliability and validity of the findings, I used member checking. In addition, I reported the findings based on participants' responses. The researcher must remain neutral by refraining from influencing the data collected (Orobia et al., 2013).

The researcher has a significant role in the reporting of research findings and can determine the degree of influence given to participants' perspectives (Orobia et al.). When researchers use participants' verbatim responses for data analysis, the richness of the data and findings are enhanced (Richards & Morse, 2013). The audio recording of interviews helps researchers in using participants' exact wording in data analysis.

Using HyperRESEARCH program to organize the data into files, identify themes in the data, and analyze the data helped with the massive data from the interviews. Using CAQDAS such as HyperRESEARCH to analyze data enhances the quality and reliability of findings (Fielding et al., 2013). Humble (2012) posited that CAQDAS such as HyperRESEARCH is easy to use and efficient in coding data, retrieving data, generating themes from data, and analyzing data. HyperRESEARCH is particularly useful in analyzing data because the program speeds up the process of analyzing massive data generated in qualitative studies and allows easy access to retrieve data (Gale et al., 2013).

The interview questions focused on obtaining the experience of project management professionals regarding conducting postproject reviews and the benefits and impact of captured lessons learned on project success. The themes focused on statements relevant to conducting postproject reviews and capturing learning to achieve the intent of the study. Organization learning is the conceptual framework of this study, and Jugdev and Mathur (2013) pointed out that organizational learning influences the way in which an organization resolves potential organizational problems and prevents a repetition of mistakes. Sustaining improvements in an organization depend largely on the organization's ability to learn (Emmons, 2013). Sharing knowledge within an

organization helps to build knowledge database, which is accessible to apply to project-based challenges that organizations frequently encounter (Kelly et al., 2013). Maluleke and Marnewick (2012) stated that postproject reviews are useful means for project managers to learn and stimulate organizational learning.

<div align="center">**Reliability and Validity**</div>

Reliability

In qualitative research, reliability relates to the quality of the findings. Ensuring the reliability in qualitative research requires the researcher to make a good judgment about the accuracy of the methods used and the integrity of the data interpretation (Noble & Smith, 2015). Reliability improves the dependability of research findings and is achievable when another researcher can follow the decision trail used by a researcher (Elo et al., 2014). Reliability reflects the use of appropriate procedures for ensuring quality and consistency in data interpretations (Åkerlind, 2012).

Improving the dependability of research findings include describing the purpose of a study and discussing the procedure for selecting participants for a study (Elo et al.). An additional improvement involves describing the process for the collection of data and the duration and explaining the coding of data for analysis (Elo et al.). Discussing the interpretation and presentation of findings, and communicating the techniques employed to determine the credibility of the data improve dependability (Elo et al.). Ensuring reliability in qualitative research addresses the criticisms associated with qualitative research's lack of scientific rigor and weak justification of employed methods (Noble & Smith, 2015). Furthermore, reliability addresses the lack of transparency in the analytical

procedures, and the findings through personal opinions, which are subject to researchers'

bias (Noble & Smith).

To ensure reliability and consistency of this study finding, I documented the

method and procedures employed and set up a database for the study. In addition, I

provided a detailed description of the research methods and compared the findings of this

study to the findings of existing literature for similarities and differences. Furthermore, I

captured the exact words of participants with a sound recording tape and checked the

transcripts multiple times for any apparent mistakes to improve the reliability of this

study. Moreover, I compared the data with the codes multiple times to ensure

consistency in the definition and meaning of codes during coding and used CAQDAS in

analyzing the data.

Validity

In qualitative research, validity relates to the accuracy of the findings. To ensure

the accuracy of this study, I established credibility for the findings by accurately

interpreting and communicating the findings from participants' responses. Researchers

need to establish credibility for their research findings from the perspectives of the

participants (Venkatesh, Brown, & Bala, 2013). The findings of a qualitative research

are credible when the findings represent an accurate interpretation of human experiences

that people who share the same experience could recognize (Elo et al., 2014). A

researcher can establish credibility for the findings of a qualitative study by generating

confidence in the truth-value of the findings (Noble & Smith, 2015). Additionally, a

researcher can strengthen the credibility of a qualitative study with prolonged

engagement on data collection site, triangulation, peer debriefing, and member checking (Noble & Smith.). I used member checking to enhance the accuracy of the findings.

In qualitative research, confirmability is the degree to which other researchers can confirm or corroborate the findings (Elo et al., 2014). Researchers can achieve confirmability in a qualitative research after addressing the truth-value, consistency, and applicability (Noble & Smith, 2015). Providing an audit trail for the methodological and critical judgments made during the research process is one of the means of achieving confirmability in qualitative research (Houghton et al., 2013). To ensure confirmability of this study, I documented the notes regarding personal feelings, biases, and insights immediately following each interview.

To ensure transferability of the findings of qualitative research to other contexts or settings, researchers need to describe in details the research context and the assumptions central to the research (Elo et al., 2014). Similarly, a rich detail of context facilitates the evaluation of study findings and transferability to other settings (Noble & Smith, 2015). Likewise, to enhance transferability of qualitative research findings, researchers should provide rich descriptions, including accounts of the context, research methods, and examples of raw data (Houghton et al., 2013). I described the background of the research phenomenon and assumptions made thoroughly. Additional descriptions included participants providing truthful and candid responses about conducting postproject reviews to capture lessons learned and giving accurate answers in replying to the questions asked. Furthermore, I described the criteria for participation in this study, which include having more than five years project management experience and prior

involvement in postproject reviews to capture lessons learned. More descriptions included the personal semistructured interviews, which offered opportunities to explore themes related to the topic of the study and the unbiased, ethical analysis and interpretation of the data to improve the transferability of this study.

I used member checking to determine the accuracy of this study findings and enhance the validity. Interpreting the data from the perspectives of the participants enhances the credibility of research findings (Venkatesh et al., 2013). To use member checking, I sent the generated themes, interpretations of the data, and conclusions to all participants to seek their views on the accuracy and credibility of the findings compared to their responses. I conducted member checking as a follow-up to the first interview. Follow-up interview allows participants to reflect on the initial interviews and verify the accuracy of the descriptions (Elo et al., 2014). Furthermore, conducting a follow-up interview in a different setting may expand the description of the findings (Elo et al.).

The advantage of using member checking includes providing an opportunity for the researcher to share the findings with participants and improves research credibility and participants' involvement (Harvey, 2015). Member checking is an analytical technique that establishes credibility for qualitative research findings (Elo et al., 2014). Brandburg et al. (2013) stated that member checking provides the opportunity to assess the accuracy with which a researcher represented participants' personal views and validated findings.

I also used rich, thick description to convey the study findings. Providing detailed descriptions of themes from the participants' perspectives may enhance the richness of

qualitative research findings (Denham & Onwuegbuzie, 2013). The rich description of study findings may transport readers to the setting and create an element of shared experiences (Elo et al., 2014). Using rich, thick description to communicate the findings in qualitative research may add to the validity of qualitative research findings (Venkatesh et al., 2013).

Achieving data saturation in a study occurs when no new themes, findings, concepts, or problems are evident in the data in subsequent interviews (Dworkin, 2012). I conducted six interviews with one project sponsor and five project managers. To ensure data saturation, I looked for additional information from participants' responses, the emergence of new themes, and possibility of further coding. In a case study research, data saturation is an indication that the researcher has reviewed all data, and no evidence of new themes is feasible from more interviews (Palinkas et al., 2013). Moreover, if the researcher believes subsequent interviews may not produce new data that is data saturation point (Sargeant, 2012). O'Reilly and Parker (2012) indicated that researchers continue sampling until the data collection generates no new information and indicates fewer surprises and new emergent patterns in the data. Likewise, efficient use of data saturation in qualitative research ensures the collection of adequate and quality data (Dworkin).

Transition and Summary

The purpose of this Section 2 is to provide the process for the data collection to explore the benefits of conducting a postproject review to capture lessons learned. This section covers an extension of the purpose of this study, the role of the researcher, the

participants, the research method and design, the population and sampling, and the ethical

research. In addition, the section covers the data collection instruments, the data

collection technique, the data organization techniques, the data analysis, and the

reliability and validity. As the researcher and the central research instrument, I obtained

data through face-to-face and telephone interviews. I interviewed one project sponsor

and five project managers who have more than five years project management experience

and had participated in previous postproject reviews. To enhance the reliability and

validity of the findings, I used HyperRESEARCH program to organize the data into files,

identify themes, and analyze the massive data from the interviews. Section 3 of this

study covers presentation of findings, application to professional practice, implications

for social change, recommendations for action and further research, reflections, and

summary and study conclusions.

Section 3: Application to Professional Practice and Implications for Social Change

Introduction

The purpose of this qualitative case study was to explore how organizational leaders use postproject reviews to prevent project managers from repeating the same mistakes and increasing cost and time overruns and project failure. The data collection process involved semistructured face-to-face interviews with four participants and telephone interviews with two participants. The participants consisted of three male and three female professionals who have more than 5 years of project management experience and have participated in various postproject review sessions. The participants also comprised of one project sponsor and five project managers, with four participants being Project Management Professional certified.

I transcribed the interview recordings. Transcribing the interviews personally, which involves multiple playbacks of the recordings, provided an opportunity to be thoroughly familiar with the data. I used HyperRESEARCH software to code, analyze, and generate common themes from the data. I developed common themes from keywords, phrases, similarities, and differences from participants' responses (Yin, 2014). The generated themes from participants' responses provided insight into strategies organizational leaders used to ensure project managers capture lessons learned. Five themes emerged from the data analysis, and they include (a) effective lessons learned, (b) capturing lessons learned, (c) benefits of lessons learned, (d) barriers to postproject review, and (e) leadership support.

Presentation of the Findings

The presentation of the findings of this study addressed the overarching central research question of how organizational leaders use postproject reviews to prevent project managers from repeating the same mistakes and increasing cost and time overruns and project failure.

Five themes emerged from the data analysis, and they include (a) effective lessons learned, (b) capturing lessons learned, (c) benefits of lessons learned, (d) barriers to postproject reviews, and (e) leadership support. The generated themes provided a broad understanding into the importance and benefits of lessons learned, barriers of why project managers are ignoring executing postproject reviews, and strategies organizational leaders are employing to ensure project managers execute postproject reviews. The themes also provided insight into additional strategies leaders can employ to ensure project managers execute postproject reviews. I presented the themes based on the participants' responses.

First Theme: Effective Lessons Learned

Lessons learned is the captured learning from the management of a project, and the project team can capture the learning at any time during the lifecycle of the project. Carrillo et al. (2013) described lessons learned is as knowledge or understanding that organizations gain through individuals and collective experience. Learning comes from project success where the project team meets the project expectations, and the team can repeat such success on future projects. Likewise, learning comes from project failures where the project team fails to meet the project expectations, and the team would like to

improve and not repeat same mistakes twice. The process of lessons learned is an important way of gathering and sharing both formal and informal project knowledge (Carrillo et al., 2013).

The process of capturing learning is one that crosses functional boundaries and allows managers to learn from projects' mistakes and successes (Velandia-González et al., 2015). Effective lessons learned process prevents project teams from repeating mistakes made in past projects and allows the project team to repeat successes made in previous projects. Based on the findings, all the participants supported capturing lessons learned and that the process should be part of any organization's overall policies and procedures on continuous improvement process.

Participant A stated that lessons-learned was one of the most critical things that project teams could do regarding having cultural continuous improvement. Participant A also shared that lessons learned are vital to continuous improvement culture, where project teams need to be efficient and smart about projects, and part of the improvement culture is not to reinvent the wheel and repeat mistakes. Furthermore, participant A indicated that capturing and employing lessons learned from one project to the next are critical in an environment where project managers implement many of the same projects.

Participant B stated that the team conducted post procurement reviews to capture lessons learned and use them to improve the proposals for new projects. Participant B also indicated that the project team captured lessons learned to improve the management of new projects, and ensure the team does not repeat similar mistakes from past projects. Furthermore, participant B explained that lessons learned are critical to the development

of project managers and success of projects. In conclusion, participant B suggested that capturing learning is a good practice that every organization should implement.

Participant C stated that at the completion of a project, the project manager must take the time to look back at the project from all aspects and review the pluses and minuses, and open them up for discussion. Participant C also stressed that the project manager should not be the only judge in assessing the project performance; instead, the project manager should solicit views from all stakeholders, including the sponsor and end users. Furthermore, participant C indicated that the project manager should encourage team members to express their opinions about what the team did well and could have done better. Moreover, participant C shared that project team members should have a voice about what slowed the project down or added costs and how to avoid identified pitfalls in future projects.

Participant D stated that conducting a postproject review to capture lessons learned is a good practice based on experience. Participant D also indicated that project teams should review every project to capture learning, whether it is a 1-hour or 2-day session. Participant D concluded that even if a project went well, the team could learn from the project review session by talking about what went well and how to apply the success in the next project.

Participant E stated that conducting a postproject review to capture lessons learned for any project is important, and ideally, project teams should do a review at every stage of the project such as closing out the planning phase and moving on to the execution phase. In addition, participant E said executing postproject review is necessary

for the project team to regroup and share thoughts about the project. Furthermore, participant E indicated that a postproject review is good to take a step back and identify what went well and what did not go so well at each stage of the project.

Closing out a project is critical because project managers have to capture the lessons learned as a deliverable before closing out the project. The project manager needs to capture new information for future learning and store the information so that other project managers can access it for future projects. Capturing lessons learned is also good for team members to have transparency and open discussion about the project to build a sound foundation for future projects.

Capturing lessons learned at the end of a project is also a good way to close out the project, celebrate the success of the project, and sunset the team accordingly. Lessons learned is a valuable part of a project, and project managers should capture the learning at each stage of the project such as the end of the planning and execution phase and at the end of the project to review the overall scope of the project, accordingly. Participant F stated that capturing lessons learned is a huge benefit to any project, especially if the project manager can get the views of the sponsor and other stakeholders about the project performance. In addition, participant F shared that lessons learned are invaluable to the management of the next project.

Second Theme: Capturing Lessons Learned

Project managers often capture knowledge gained at the end of the project for small projects. On larger and longer-term projects, project managers capture learning at the end of each project phase such as planning, design, construction, and completion of

the project to review the learning. Capturing learning is essential to prevent losing significant learning due to a short time, memories fading, and team members leaving projects.

Capturing lessons learned is the process of reviewing a project for what worked well, what did not work well, and what the project team could have done differently to improve the outcome of the project (Velandia-González et al., 2015). In a successful project, the experience may be a positive experience while, in a failed project, the experience may be a negative experience for the project team (Velandia-González et al.). Participants' responses support capturing lessons learned as an effective means of learning among project teams.

Participant A stated that she sent out a standard template to all team members for each phase of the project, including the planning and execution, and asked them for what went well, where opportunities for improvement were, and what they would do differently next time. The template also captured general comments from the team and the team perspectives on how the project went. Participant A stated that the project team conducts post phase reviews to capture any learning at the end of each phase of the project, and postproject reviews at the end of projects.

Participant B stated that at the end of the project, the team conducted a postproject review with the contractor and the owner's group and asked about any lessons learned during the project and what the team could have done better. Participant B indicated that the team reviewed some of the issues that occurred during the design and construction phases, what the team could have done differently to improve the project, and the

management of the stakeholders' communication. Participant B shared that the key

lesson learned from the project was improving communication. Furthermore, participant

B pointed out that the team conducted reviews at the beginning and end of the project to

assess the team performance for the bidding and execution of the project. Participant B

concluded that the team learned a lot at the end of the project because they were able to

review all the phases of the project and learned about what went well and what did not

work well.

Participant C stated that the team captured learning throughout the project stages.

In addition, participant C indicated the project manager encouraged the team members to

take notes on lessons learned as the project progresses and not wait until the end of the

project because the best time to capture any learning is when significant issues happen

and noted. Participant D stated that the project team discussed lessons learned during

project meetings, including a review at the end of each phase and the end of the project.

In addition, participant D indicated that the project manager encouraged the team

members to take notes during the project and put together a list of issues and concerns

they would like to talk about during the project meeting.

Participant E stated that the project manager added the review of lessons learned

to the agenda of the project meeting to ensure that the team met the goal of developing a

user-friendly website. Participant E also indicated that the team used the review to

measure the team's progress regarding the milestones, original objectives, stakeholders

feedback, and time for the implementation plan. Furthermore, participant E explained

that the team used the review to measure the end users' eagerness to explore the final

product. Moreover, the team used the review to capture the transparency of the information and identify potential risks, and if the risks were manageable.

Participant E stated that the team provided feedback in the form of lessons learned at the project meetings. Participant E also reported that the team used email blast as a form of communication to share information with shareholders. In addition, participant E indicated that the team sent out communication to the end users through several means, including newsletters, Emma vision boards, and email blasts to keep the end users up to date. Furthermore, participant E reported that the team captured lessons learned from meeting minutes as well as from the project status report.

Participant F stated that the team captured the learning through meetings and talked about what went well with the project, what did not go well, and what could they improve on. Additionally, participant F indicated that the team captured lessons learned during each project phase when the team sensed that something was not right, or the project was going the wrong way. Participant F also reported that the team reviewed identified issues and learned from the outcome. In conclusion, participant F shared that the team conducted a postproject review at the end of the project to review all phases and captured the overall knowledge gained.

Third Theme: Benefits of Lessons Learned

The process of postproject review is an essential practice conducted to capture lessons in a project. Captured learning provides a database of information that serves as a historical baseline for new projects. Project managers can access the lessons learned database and use the data and information to estimate costs and scheduling, identify

customer expectations, establish a range of acceptable quality standards for project deliverables, and identify potential risks and quantify their impact. In new product development projects, lessons learned from similar past projects are vital to mitigating potential risks (Baxter et al., 2013). Project managers generate a report of the knowledge gained at the end of postproject reviews, which aids project teams to learn from mistakes and successes of past projects and employ them in future projects (Carrillo et al., 2013). The findings indicated that all the participants recognized the benefits gained from lessons learned.

Participant A stated that the team benefited from learning by employing learning from the interface of the cultures, communications, leadership styles, and meeting styles of the company and other companies from previous projects. Participant A also reported that the team employed lessons learned from previous projects about giving more lead time to vendors regarding issues with responsiveness, technical problems, and getting resources onsite on time to prepare and troubleshoot equipment. In addition, participant A indicated that the team employed lessons learned from previous projects regarding giving clear expectations about when they need the equipment on site and what the vendors needs to do. Furthermore, participant A reported that the other learning the team employed was the experience with planning majority of the work over the summer and working with the European vendors during the summer. Participant A shared that the team realized too late the first time the team ordered equipment in the summer when all the European vendors were out on annual leave for the whole summer, and every person

on the project team was out. Therefore, it was a lesson learned that benefitted the team in the management of subsequent projects.

Participant B stated that lessons learned helped the team perform better on the project because the team reviewed relevant learning from past projects from the onset of the project and applied the lessons learned. Participant B also reported that the key learning from past projects was improved stakeholders' communication, which the team implemented in the project by establishing a line of communication with one person. By establishing a line of communication, the owner or consultant knew that they had to communicate through the contact person and not give information or instructions directly to the contractor. The team also kept the stakeholders informed of project status promptly.

Participant C recognized that a major benefit of lessons learned was incorporating some of the lessons learned in a recent project to the next project. The project team gained knowledge from past projects regarding the quality of the project, workmanship, and project management; and the expertise of the project teams and contractors. Furthermore, participant C indicated that the project team applied lessons learned from previous projects to improve potential safety issues the team could encounter in the executed project.

Furthermore, participant C stated that the team benefitted significantly from the application of lessons learned to cost control, cost evaluation, and cost savings, which improved the success of the project. Moreover, participant C reported that the team benefited from employing lessons learned to the design and implementation criteria that

could have affected the efficiency of managing the project. Additionally, the team

employed lessons learned about scheduling and timing, which was useful to the project.

Participant D stated that improved communication was the main benefit of the

experience the team employed on the project, and the applied experience contributed

significantly to the success of the project. Based on the improved communication, during

the project, the project manager stepped up the stakeholders' communication and kept

everybody informed about the status of the project promptly. Participant E

acknowledged that one of the lessons learned employed from past projects was a survey

sent out to all site users to capture their thoughts before and after the project. The survey

was a qualitative approach for capturing the end users' comfort level with the information

from the newly completed website.

Participant E also shared that the team used a mailbox, a lesson learned from a

past project to capture the end users' thoughts about the final product. Setting up the

mailbox was a more passive approach for the end users to send questions or feedback to

the project manager. All the stakeholders had the opportunity to contribute to the project

through the survey or mailbox, and the team explored and captured the feedback,

accordingly.

Participant E reported that the project team ensured that all the stakeholders had a

voice in providing the feedback on the failure and success of the project. The project

created lessons learned that the project team and other teams can use in new projects. In

conclusion, participant E believed that what went well and what did not go so well in the

project were relevant to all stakeholders, and the team captured the learning from all areas.

Participant F recognized that lessons-learned is beneficial especially if the criticism about the project performance is constructive and project managers can apply the outcome of project reviews to new projects. The project team applied lessons learned from past projects by spending more time with the sponsors to improve the communication and keep all stakeholders informed of the project status. Additionally, participant F shared that the team ensured that the project sponsor understood the importance of managing potential risks to the project. Participant F believed that risk management was the most important lessons learned employed from past projects to improve the success of the case study project. Furthermore, participant F acknowledged that keeping the project sponsor informed of potential risks was beneficial because if the team runs into any identified risks, the sponsor would have been aware and applying the planned action to mitigate or accept the risks would be easy. In conclusion, participant F believed that capturing lessons learned is beneficial because if a project manager captures lessons learned six months ago, a similar new project could obviously benefit from what worked well and what did not work well, which could be helpful to the manager of the new project.

Fourth Theme: Barriers to Postproject Review

A postproject review is one of the means of capturing lessons learned and empowering organizational learning to gain a competitive edge in the knowledge economy (Andrew, Shang, & Pheng, 2015). However, the use of postproject reviews is

limited due to the temporary nature of projects and the associated barriers (Andrew et

al.). As a result, many organizations are not benefiting from capturing and sharing of

knowledge from past projects, leading to the loss of precious lessons learned and an

overall inability to learn from past mistakes (Andrew et al.).

Lack of leadership involvement and commitment to the learning process is the

most critical barrier to postproject review (Andrew et al., 2015). An effective lessons

learned process has disciplined procedures that people are held accountable to follow.

Additionally, effective learning means encouraging openness about making mistakes or

errors in judgment and leading by example.

Other barriers to postproject review include difficulty in coordinating postproject

review, the high cost of conducting a postproject review, the lots of time involved in

conducting a postproject review, and the unwillingness of people to share their

experience (Andrew et al., 2015). Additional barriers include the reluctance of people to

discuss the problems encountered by the team, and lack of inclusion of postproject review

in the contract (Andrew et al.). Further barriers include lack of knowledge to conduct a

postproject review well and the inadequate infrastructure to distribute and disseminate the

outcome of postproject reviews (Andrew et al.).

Participant A acknowledged the problems associated with conducting postproject

reviews and stated that sometimes it was hard to conduct a postproject review at the end

of a project because the team just wanted to move on to the next project. In addition,

participant A shared that some project managers perceived the amount of time involved

in capturing lessons learned to be high and are usually not included in the budget and

schedule. Participant A observed that project managers who had used lessons learned from other projects valued learning and willingly participate in capturing lessons learned than project managers who have not used lessons learned from other projects. In conclusion, participant A indicated that project managers should remind the team about conducting postproject reviews at project meetings, and get the conversation going so that the team could see the value in the process. Participant C acknowledged that allocating cost for the labor hours required for capturing learning was something usually left out of the budget and one reason people pushed back on participating in project review sessions. However, participant C shared a strategy used by project managers to encourage teams to attend postproject reviews by reminding the team continuously about the final review at meetings and other means of communication, and always get a good turnout with a positive attitude.

Fifth Theme: Leadership Support

Organizational leaders continuously develop new approaches to capture lessons learned to maintain and improve the process (Duffield & Whitty, 2015). To reflect on the learning of specific projects and a designated process to share learning across the organization, organizational leaders incorporated learning as an instrumental part of their overall policies and procedures for continuous improvement (Velandia-González et al., 2015). A key component of successful project management is the ability to capture key lessons learned throughout the phases of the project, as well as at the end of the project (Velandia-González et al.). All the participants responded positively to the need for organizational leaders to support and commit to the conduct of postproject reviews.

Participant A stated that the organizational continuous improvement culture helped project teams to be efficient and smart about managing the projects and ensured the teams do not reinvent the wheel and repeat mistakes. In addition, participant A suggested that leaders should ensure that capturing lessons learned is part of the project process and a requirement for project managers to close out projects. Furthermore, participant A believed that leaders should make the process of capturing lessons learned part of the normal business as usual, and project deliverables.

Participant B stated that as part of the organizational policy, the leaders request capturing lessons learned at the completion of a project to prevent the project teams from making similar mistakes twice. The organizational policy guides project managers through the project process, and the teams followed the procedure diligently to learn and improve the success of new projects. In addition, participant B acknowledged that organizational leaders believed the project teams could not stop learning because there is always room for individual improvement.

Participant C stated that project managers should include the conduct of postproject review as milestone and deliverable for any project over a certain cost and duration at the onset of the project. In addition, participant C believed that organizational leaders need to buy into the concept of conducting a postproject review for project managers to allocate cost for the process. Furthermore, participant C indicated that project managers should review projects and outline the expectations for the postproject review at the onset of the project. Moreover, participant C believed that if the emphasis to conduct postproject review comes from organizational leaders that will give project

managers the legitimacy to add the cost and time for capturing lessons learned to the budget and schedule. In conclusion, participant C noted that project managers can encourage teams' participation in postproject reviews by making the reviews simple and easy, and incorporate sessions to celebrate the success of the project. Participate D acknowledged that the organizational policy included a procedure that mandated the capturing of lessons learned as a deliverable and requirement for project closeout. In conclusion, participant D suggested that leaders could improve the conduct of postproject reviews by allowing project managers to include the cost of the labor hours involved in the budget because lots of labor hours are involved.

Participant E suggested that one way to ensure consistency in the conduct of postproject reviews is for leaders to provide standard tools to project managers to ask questions and capture the teams' views. In addition, participant E believed that as a strategy, leaders should make capturing lessons learned as a deliverable for project closeout. Participant F suggested that as a strategy, leaders could include capturing learning as part of the expectations at the onset of the project. In addition, participant F indicated that leaders should encourage team members to take note of activities observed not to be right or that is great as the project progresses so that they have a note of lessons learned for review at the end of the project.

Summary of Findings

The five themes that emerged from the data analysis are (a) effective lessons learned (b) capturing lessons learned, (c) benefits of lessons learned, (d) barriers to postproject review, and (e) leadership support. Effective lessons learned identified codes

that referenced participants' responses regarding the importance of effectively capturing

learning throughout the lifecycle of a project, including the onset, at the end of each

phase, and at the end of the project for the benefit of future projects. Capturing lessons

learned identified codes that referenced participants' responses regarding when the

project team captured learning such as at the beginning of the project, end of each phase

of the project, and at the end of the project. The theme also identified codes that

referenced how the project team captured the lessons learned such as through template,

survey, mailbox, meetings, and project reviews.

Benefits of capturing learning identified codes that referenced participant

responses regarding accessing the database of the organization for lessons learned from

past projects, applying the learning to the project, and the impact of the applied learning

on the outcome of the project. Barriers to postproject review identified codes that

referenced participants' responses regarding issues the project team had for not being

able to capture lessons learned or use knowledge gained from previous projects, which

may result in potential loss of significant learning. Leadership support identified codes

that referenced participants' responses regarding the project-team conduct of postproject

review and strategies the organizational leaders employed to ensure the project team

conducts postproject review to capture lessons learned.

The central research question addressed in this study is how organizational

leaders use postproject reviews to prevent project managers from repeating same

mistakes and increasing cost and time overruns and project failure. The findings from the

participants' responses indicated that the organizational leaders used a standard template

and the company's policies and procedures, which include a mandate that project

managers must capture the lessons learned before closing out the project. In addition, the

findings captured suggestions by all the participants on additional effective strategies that

organizational leaders can employ to ensure that project managers conduct a postproject

review to capture lessons learned.

The learning organization literature provides an understanding of how learning

can be captured and employed in future projects to improve their performance. The study

shows that using template, survey, mailbox, meeting, and project reviews, organizations

used company policies and procedures to ensure project managers conduct a postproject

review at the end of a project and closeout a project only when the team captures the

lessons learned. The study also captures suggested strategies that can further ensure that

project managers conduct a postproject review and capture learning.

Suggested strategies include leaders ensuring that lesson learned is part of the

project process and project managers should not close out a project without the associated

learning. Another strategy is that leaders should make lessons learned part of the normal

business as usual, and emphasizing that it should be part of project deliverables. Another

strategy is that leaders should let project managers build the time for postproject reviews

into the budget and schedule at the onset of the project. Another strategy is that leaders

should provide tools to project managers so that they have a standard template of

questions to ask in capturing lessons learned and ensure consistency in the conduct of

postproject reviews. The last suggested strategy is that leaders should encourage team

members to take notes on learning as the project progresses so that they have the noted items for review at the end of the project.

This study highlights the important and benefits of capturing lessons learned and strategies managers use to ensure the conduct of postproject reviews. Postproject reviews are effective tools for empowering organizational learning and helping companies gain a competitive edge in the knowledge economy (Andrew et al., 2015). However, the use of postproject reviews has been limited, due to the temporary nature of projects and the associated barriers. A lack of research in this area has resulted in a little focus on the underlying causes of the failure to implement such reviews (Andrew et al.). This study extends existing literature on lessons learned and postproject review.

Findings, Conceptual Framework, and Literature Review

The results of this study indicated that capturing learning at the onset of a project, at the end of each phase of a project, and at the end of a project is essential in the development of individuals and organizations and valuable to the success of projects. These findings support and corroborate organizational learning, which is the conceptual framework of this study. In 1978, Argyris and Schon developed the concept of organizational learning for detecting errors in one project and correcting errors in other projects.

The model of organizational learning contributes to organizational memory and development of employees through the accumulation of histories and experiences (Argyris & Schon, 1978; Smith, 2012). One of the effective ways of capturing and sharing knowledge from projects and improving individuals' and organizational learning

is by conducting postproject reviews (Andrew et al., 2015). A postproject review provides an opportunity to capture the learning in one project to improve the success of another project. In addition, captured learning also improves the knowledge base of organizations.

The findings also align with the literature review on organizational learning in section 1 of this study, which holds that learning is essential for the growth of individuals and organizations through amassing knowledge. The literature review explores organizational learning through capturing, sharing, and transferring knowledge; and potential barriers to capturing lessons learned. Carrillo et al. (2013) stated that captured learning contribute to organizational memory and prevent a repetition of mistakes resulting in improved project performance.

Applications to Professional Practice

Implementing best business practice strategies are critical to the success of any organization. One of the contributions of the findings of this study to business practice is the understanding derived from participants' responses regarding the importance of capturing and employing lessons learned and strategies organizational leaders use to ensure project managers do not ignore conducting postproject reviews. These findings may allow organizational leaders to appreciate the significant impact of capturing and applying lessons learned from successful and failed projects to project success. These results may also aid leaders' in deciding effective strategies to implement for successful project management, the decision of which may benefit and improve business practices and affect organizations' bottom line, considerably. When leaders recognize the benefits

of capturing, documenting, and sharing lessons learned and buy-in into the practice of conducting project reviews, project teams are encouraged to capture learning in projects and leverage organizational knowledge (Selaolo & Lotriet, 2014).

The findings of this study may also show the benefits of establishing a knowledge management system within organizations to preserve the critical knowledge gained by project teams. Based on lessons learned in past projects, project managers tend to leverage organizational knowledge base to address similar potential risks that they may encounter in their projects. Project managers may also leverage organizational knowledge system to prevent reinventing the wheel for potential risks in projects or repeating mistakes in past projects.

This study contributes to organizational leaders' understanding of the benefits and impact of capturing lessons learned at the onset of a project, at the end of each phase of a project, and especially, at the end of a project through postproject review sessions. This study also contributes to effective strategies organizational leaders use and can employ to ensure project managers capture lessons learned in a project. This study also serves as a reference for future studies on conducting postproject reviews and capturing learning.

Implications for Social Change

The implication for positive social change includes the potential use of the knowledge gained from past projects to improve business practices, project success, and organizational competitive advantage. When project teams apply standard and improved business practices to project management, which may improve project performance significantly, organizations benefit through cost avoidance (Wysocki, 2014).

Organizations achieve cost avoidance when they realize a significant reduction in project failures and increase in project success. The success rate of a project also increases tremendously when the project team employs knowledge from past projects (Jugdev, 2012).

In addition, this study may contribute to social change through the hiring of more people to manage projects when organizations are successful by employing knowledge gained from past project to increase project success and reduce project failures. Communities may benefit from this study through improved infrastructures built by organizations employing best business practices and effective strategies improved from project to project to manage projects. Communities also tend to benefit from project success because organizational leaders respond quickly to societal needs when they do not overrun their costs and time on many projects.

Recommendations for Action

Conducting a postproject review to capture lessons learned in a project improves the success of future projects. Likewise, conducting a postproject review involves evaluating the successes and failures of a project and learning from what worked well, what did not work well, and what the project team could improve upon for the benefit of future projects. However, many barriers prevent project teams from conducting postproject reviews resulting in significant loss of knowledge. The findings of this study identified the importance and benefits of capturing and employing lessons learned, barriers to postproject reviews, the importance of leadership support in capturing learning, and strategies leaders are using to ensure project managers perform postproject

reviews. Recommended actions that could further ensure project teams do not ignore conducting postproject reviews include:

1. Organizational leaders should recognize the importance of capturing lessons learned and the benefits of conducting postproject reviews and support the practice.

2. Organizational leaders should allow project managers to build the time for the postproject review into the budget and schedule at the onset of the project.

3. Organizational leaders should ensure lessons learned is part of the project process and project managers should not close out a project without the associated learning.

4. Organizational leaders should make lessons learned part of the normal business as usual, and emphasize that it should be part of the project deliverables.

5. Organizational leaders should encourage team members to take notes of lessons learned as the project progresses so that they have the noted items for review at the end of the project.

6. Organizational leaders should provide standard tools to project managers so that they have a standard template of questions to ask in capturing lessons learned and ensure consistency in the conduct of postproject reviews.

Organizational leaders overseeing the management of projects in all industries need to pay attention to the results of this study because they will benefit from the understanding of the perspectives of the participants regarding the importance and

benefits of conducting postproject reviews to capture lessons learned for future projects.

Additionally, organizational leaders will benefit from the participants' suggested

strategies for eliminating barriers to conducting postproject reviews and ensuring project

managers do not ignore conducting postproject reviews. Project management

professionals in all industries also need to pay attention to this study because they will

gain further knowledge regarding the importance and benefits of conducting postproject

reviews to capture lessons learned and strategies to employ to ensure they have the

support of their organizational leaders in conducting postproject reviews.

Opportunities to disseminate the results of this study will include publications in

project management journals. Additionally, I will like to share the results of this study

with other project management professionals at project management conferences and

training. This study contributes to the literature on organizational learning and

knowledge management including lessons learned and postproject reviews by furthering

understanding of the importance and benefits of capturing learning and eliminating

barriers to conducting postproject reviews.

Recommendations for Further Research

The findings of this study corroborate the importance and benefits of conducting

postproject reviews to capture lessons learned and the strategies used by organizational

leaders to ensure project managers do not ignore postproject reviews. However, there is

room for further study regarding the effectiveness of the strategies used by organizational

leaders to ensure project managers execute postproject reviews. Another area for further

study is to confirm if the recommendations from this study lead to more useful

postproject reviews, capturing lessons learned, and employing lessons learned from one project to another project.

Organizational leaders need to communicate the importance and value of postproject reviews to project teams and ensure project managers conduct the reviews effectively to capture the most learning and disseminate the lessons learned from the organization for the benefit of future projects. In addition, organizational leaders should encourage and attend the presentation of the outcome of postproject reviews to show the importance and their support of the process and recognize the accomplishments of project teams. Overall, this study may inspire researchers to focus future studies on the commitments of organizational leaders and the impact of the leader's support for effectively conducting postproject reviews.

One of the limitations of this study is small sample size, which researchers may address in a future study by interviewing more participants or use quantitative research method to gain access to more participants and extend the geographical coverage of the study to other regions in the United States. Another limitation is the subjective perceptions of participants. The findings of this study represent the participants' responses, which are subject to their subjectivity. Hence, researchers and practitioners should view the results of this study as the interpretations of the subjective perceptions of the participants. The last limitation of this study is the possible researcher's bias, which relates to my professional background in project management and personal belief in learning from the success and failure of projects. Researchers should collect the data in a natural setting, state their experiences and positions before any interview, allow

participants' responses to drive the findings, and use member checking to validate the findings.

Reflections

Walden University has a DBA doctoral study process for students, which includes (a) committee formation, (b) prospectus analysis; and (c) prospectus, proposal, and first oral presentation review. Other processes include (a) IRB review, (b) final study analysis, (c) form and style review, (d) final oral presentation review, (e) final overall quality analysis, and (f) CAO approval. I followed the checklist closely to write my doctoral study and worked diligently with my Chair, Second Committee Member, and the URR (University Research Reviewer) to ensure I follow the steps properly to expedite the completion of my study. My committee has reviewed my submissions thoroughly and returned my reviewed submissions with useful feedback, and my experience with the process is excellent.

I had no preconceived conclusions about what the results would be when I started the study. However, as a project management professional with over 28 years of experience in managing capital construction and renovation projects, my views support the goals of the study. The goal of the study is to show there are benefits to conducting postproject reviews to capture lessons learned, and organizational leaders need to support the conduct of postproject reviews and ensure project managers do not ignore the practice. To mitigate the potential effects of my personal bias, I identified my bias up front and was open to opposing findings. Additionally, I used HyperRESEARCH qualitative software to generate the themes and interpreted the results based on

participants' responses. I also used member checking to validate the results by providing

participants with my interpretation of the data and conclusions to confirm if the data

analysis and results represent their responses. My views did not change after interpreting

participants' responses because the findings align with my views regarding the topic of

the study.

The DBA doctoral program has been a marathon, and the doctoral study process,

which is well articulated, has contributed positively to completing the journey. I have

strong belief that the results of this study will benefit organizational leaders and project

managers in ensuring that project teams capture and employ lessons learned to improve

project performance, the outcome of which may significantly impact the bottom line of

their organizations. I plan to share this study with professionals involved with project

management through publications in professional journals and presentations at

conferences and training.

Summary and Study Conclusions

The purpose of this qualitative case study was to explore how organizational

leaders use postproject reviews to prevent project managers from repeating same

mistakes, increasing cost and time overruns, and project failure. This study comprises

three sections, which includes: (a) foundation of the study, (b) the project, and (c)

application for professional practice and implications for social change. Section 1, the

foundation of the study covers the background of the problem, the problem statement,

and the purpose statement. The foundation of the study also covers the nature of the

research, the research question, the conceptual framework, the operational definitions, the

assumptions, the limitations, the delimitations, the significance of the study, and the

literature review.

Section 2, the project covers an extension of the purpose statement, the role of the

researcher, the participants, the research method and design, the population and sampling,

the ethical research, the data collection instruments and techniques, the data analysis, and

the reliability and validity of the data. Section 3, application to professional practice and

implications for social change covers the presentation of the findings, the application to

professional practice, and the implications for social change. The section also covers the

recommendations for action and further research, the reflections on the study process, and

the summary and conclusions of the study.

The central research question addressed in this study is how organizational

leaders use postproject reviews to prevent project managers from repeating same

mistakes, increasing cost and time overruns, and project failure. The findings from the

participants' responses indicated that organizational leaders use a standard template and

organizational policies and procedures to ensure project managers perform postproject

reviews to capture lessons learned. In addition, the findings captured additional effective

strategies that organizational leaders can employ to ensure project managers do not

ignore postproject reviews. The strategies include:

First, leaders should ensure that lesson learned is part of the project process and

project managers should not close out a project without the associated learning. Second,

leaders should make lessons learned part of the normal business as usual, and emphasize

that it should be part of project deliverables. Third, leaders should allow project

managers to build the time for postproject reviews into the budget and schedule at the onset of the project. Fourth, to ensure consistency in conducting postproject reviews, leaders should provide standard tools to project managers, so that they have a standard template of questions to ask in capturing lessons learned. Five, leaders should encourage team members to take notes on learning as the project progresses, so that they have the noted items for review at the end of the project.

The main contribution of this study to business practice is the understanding organizational leaders may derive from the findings regarding the importance of capturing and employing lessons learned and strategies to ensure project managers do not ignore postproject reviews. In addition, the findings may aid leaders' in deciding effective strategies to ensure project managers perform postproject reviews to capture lessons learned, the decision of which may benefit and improve business practices and significantly affect organizations' bottom line. The implication for positive social change includes the potential hiring of people to manage new projects when organizations complete more projects through lessons learned from previous projects and could respond quickly to societal needs for more projects.

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Appendix A: Consent and Confidentiality Form

You are invited to take part in a research study of exploring the benefits of capturing and applying lessons learned. The researcher is inviting you to be in the study because you were involved in the management of a project in the New York metropolitan area, have more than 5 years project management experience, and have participated in at least one postproject review session. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to participate.

This study is being conducted by a researcher named Gafar Fadairo, who is a doctoral student at Walden University.

Background Information:

The purpose of this study is to explore the benefits of capturing and applying lessons learned and what strategies organizational leaders are implementing to ensure project teams conduct postproject reviews after project completion. Managing and successfully completing a project within budget and on the schedule is important and applying lessons learned from both successful and failed projects could improve project success.

Procedures:

If you agree to be in this study, you will participate in a:

- Face-to-face or phone interview of six questions regarding the application of lessons learned to one of your managed projects and capturing of learning during the same project. The interview will be about 30 minutes or less and audio recorded.

- Follow up meeting to share the study findings with you and seek your opinion regarding the data collection process and the interpretation and conclusion of the findings. The meeting will be about 30 minutes or less.

Here are the six questions to be asked:

7. How will you describe the conduct of postproject reviews or other means of capturing lessons learned that you attended and the outcome of the reviews?

8. What lessons learned did you employ on this project?

9. What were the benefits and impact of the lessons learned you employed on the success or failure of this project?

10. How did you capture the lessons learned on this project?

11. What is your view regarding conducting postproject reviews to capture lessons learned?

12. What strategies do organizational leaders implement to ensure project managers do not ignore postproject reviews?

Voluntary Nature of the Study:

This study is voluntary. I will respect your decision of whether or not you choose to be in the study. I will not treat you differently if you decide not to be in the study. If you choose to join the study now, you can still change your mind later. You may stop and withdraw at any time. You do not need to give any reason for withdrawing and there is no penalty.

Risks and Benefits of Being in the Study:

There is a minimal likelihood of fatigue such as is common in a job interview. The potential benefit of participating in this study is your contribution to project teams' understanding of the benefits of capturing and applying lessons learned to improve project success. More successful projects and less failed projects benefit the society.

Payment:

No fee will be paid by the interviewer or by the Government to the interviewee for participating in this study. However, I will send a summary of the study findings to you.

Privacy:

The location of the face-to-face interview will be a secure enclosed space, like an office or meeting room and privacy will be ensured by putting a "do not disturb" or "room in use" sign outside the door.

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. In addition, the researcher will not include your name or anything else that could identify you in the study report. An electronic copy of the data will be kept secure on the researcher's personal computer, protected with a password in his house and on a flash drive, held in a lock-protected drawer along with hard copies in his house. The data will be held for 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Alternatively, if you have questions later, you may contact the researcher via XXX and/or XXX@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the

Walden University representative who can discuss this with you. Her phone number is

612-312-1210. Walden University's approval number for this study is **08-14-15-**

0373821, and it expires on **August 13, 2016**.

The researcher will give you a copy of this form to keep if you prefer face-to-face

interview.

Alternatively, please print or save this consent form for your records if you prefer phone

interview.

Statement of Consent

I have read above information, and I feel I understand the study well enough to make a

decision about my involvement. By signing below (face-to-face interview) or reply to

this email with the words, "I consent" (phone interview), I understand that I agree to the

terms described above.

Print Name of Participant_____

Date of consent_____

Participant's Signature_____

Researcher's Signature_____

Appendix B: Interview Protocol

Date _____ ___Location_____

Interviewer _____Participant _____

Instructions:

- Explain the purpose of the study to the participant.

- Have the participant sign the release form to ensure confidentiality.

- Audiotape the interview and assign a unique number to identify the data.

- Write the code assigned to the participant on top of the interview sheet.

- Ask questions and probe the participant to expatiate on responses.

- Thank the participant for participation in the interview.