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Employee Lack of Acceptance of Technological Change

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College of Management and Technology

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Monique L. Edwards

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Walden University
2019

Abstract

Employee Lack of Acceptance of Technological Change

by

Monique L. Edwards

MBA, California State University, Dominguez Hills, 2007

BS, University of Phoenix, 2004

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

June 2019

Abstract

Approximately 70% of technology projects fail, which negatively impacts resources,

productivity, and organizational profitability because of employees' lack of acceptance of

technological change. The purpose of this single case study was to explore strategies

some midlevel managers used to improve employees' lack of acceptance of technological

change. The conceptual framework for this study was the technology acceptance model.

Data were collected from semistructured interviews with 5 participants from a local

government organization in the southwestern region of the United States and review of

organizational documentation. Data analysis included Yin's 5 phases, methodological

triangulation, and theme identification. Four themes emerged from data analysis: training,

communication, involvement, and management support. Findings showed the importance

of providing training when implementing technological change, communicating the

change, and explaining how the change impacts employees throughout the organization.

Findings also indicated that allowing employees to be involved in the technological

change process and communicating management support of the technological change

results in increased employee acceptance of the change. Implications of this study for

positive social change include improving work products and conditions for employees

and human and social conditions for residents of the local community. Findings may

provide leaders with insights needed to integrate technological changes, and

organizational and resource allocation efficiencies to improve services to employees,

residents, and local businesses.

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Dedication

I dedicate this doctoral study to my children, Isaiah, Kodie, Elijah, and Micah. Thank you for your understanding all the times I had to study and write. You are the reason I work so hard. I pray that you watching me through this journey shows you that anything you dream of is possible. Never give up. Never stop trying.

Dad, I dedicate this study to you also. Thank you for your unconditional love and support. Thank you for all the times you allowed the kids to run wild through your house so I could write. Although no longer with us, I also dedicate this study to Mom. I hope you are proud as you look down upon us. I did this for us! To my sister, LaiLauni, thank you for all the times you called just to tell me to write and for always reminding me that I could do this, especially during the times when I felt like giving up.

I dedicate this study to the love of my life, my best friend, Carleton. Thank you for your love and support day in and day out. Without you, I would not be here. Thank you for listening to me talk about this study even when you didn't understand it. Thank you for your support with our children so Mommy could be great!

Acknowledgments

      To all the faculty, family members, and friends who helped me reach this point in my academic career, I sincerely thank you. Dr. Ify S. Diala, thank you for your ongoing support and encouragement. If not for you, I would not have reached this point. I also thank Dr. Susan K. Fan, second committee member; Dr. Ronald C. Jones, university research reviewer; Dr. Judith Blando, university research reviewer; and Dr. Susan E. M. Davis, DBA program director. Thank you all for your criticisms, feedback, and encouragement. I needed every bit of it to obtain this goal. A special thank you to all my study participants.

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Section 1: Foundation of the Study

Technological changes rapidly occur, and employees' willingness to embrace such change directly impacts business operations, organizational improvements, process and operational efficiencies, delivery capabilities, staff productivity, and profitability (Ghobakhloo & Hong, 2014; Sook-Ling, Ismail, & Yee-Yen, 2015). Accepting technological change in a government agency can be perceived as risky because the technology may be complex, use of resources may occur, and routines and power structures within the organization may be disrupted (Wang & Feeney, 2016). Politics can also influence technology adoption in a local government organization (Wang & Feeney, 2016). As citizen demands for online communication and political competition increased, so did technology adoption (Wang & Feeney, 2016). The adoption of e-services in many government organizations was a result of citizen demands for such services (Li & Feeney, 2014).

Information and communication technologies have a multilevel and multidimensional potential, because they are tools for process and conflict transformation (Tellidis & Kappler, 2016). An understanding of strategies managers use to improve employees' lack of acceptance during a technological change process is important. Organizational constraints such as daily routines and limited staff may also negatively affect employees' willingness to embrace technological change (Wang & Feeney, 2016).

Background of the Problem

Technology is a component of most business operations and changes rapidly (Darr, 2016). Employees' attitudes affect successful technological implementation

(Khatoon & Farooq, 2015). When implementations fail, rapidly changing and complex technological systems are often thought to be the reason for the failure (Rizzuto, Schwarz, & Schwarz, 2014). Technological problems account for less than 5% of project failures; the fundamental barrier to successful information technology (IT) adoption is often employee resistance to new IT adoption (Rizzuto et al., 2014).

Employee behavior toward acceptance of technological change can affect the behavior and perception of others (Jones & Van de Ven, 2016). To minimize the risk of losing money, resources, and profitability, managers should understand the significance employee resistance to technological change has on an organization's bottom line. As implementation of new technologies occurs, research on employee resistance to technological change is necessary. Change is a necessary occurrence, but successful change does not guarantee organizational success in the future (Stolnik, Hunjet, & Kozina, 2016). Change is successful when an organization transitions from the current state to the desired state without any significant negative impacts on the organization or employees (Stolnik et al., 2016).

Problem Statement

Employees' lack of acceptance of technological change is a common reason technology implementation fails, often resulting in a loss of resources, decreased productivity, and reduced organizational profitability (Hwang, Al-Arabiat, & Shin, 2016; Khatoon & Farooq, 2015). Technology projects have failure rates of approximately 70% (Khatoon & Farooq, 2015), a rate that has remained unchanged for nearly 30 years (Cecez-Kecmanovic, Kautz, & Abrahall, 2014). Sixty-six percent of technology projects

fail (Crear, 2009; Liu, Wang, & Eng Huang Chua, 2015); 61% complete late, and 40% complete over budget (Nelson & Morris, 2014). The general business problem was employee lack of acceptance during technological changes negatively influences organizational productivity. The specific business problem was that some midlevel managers lack strategies to improve employees' lack of acceptance of technological changes.

Purpose Statement

The purpose of this qualitative single case study was to explore strategies some midlevel managers use to improve employees' lack of acceptance of technological change. The targeted population included five midlevel managers from a local government agency in the Southwestern region of the United States who successfully implemented strategies to improve employees' lack of acceptance during technological changes, which resulted in increased organizational productivity. The implications for positive social change include improving work products and conditions for employees, and human and social conditions for residents of the local community. By providing insights needed to integrate technological changes, leaders may use findings to increase organizational and resource allocation efficiencies to improve services to employees, residents, and local businesses.

Nature of the Study

The three research methods include qualitative, quantitative, and mixed-methods (Denzin & Lincoln, 2011). Qualitative methods allow researchers to gather in-depth data, discover the meaning of the unknown, and reconstruct the stories of participants on a

conceptual level (Guba & Lincoln, 1994). The qualitative approach is appropriate for exploring individuals and collections of detailed information using a variety of data collection procedures over time (Stake, 1995). The quantitative researcher uses a rigorous approach to determining relationships between multiple variables (Denzin & Lincoln, 2011). The quantitative approach was not appropriate for my study because I explored strategies needed to improve the lack of acceptance of employees during technological changes. The mixed-methods approach combines qualitative and quantitative approaches. The mixed-methods and quantitative approaches are appropriate when the objective is to formulate a hypothesis and analyze numerical data (Browne, Pullinger, Medd, & Anderson, 2014). My study did not include these objectives, so a quantitative or mixed-methods approach was not applicable.

I considered several qualitative research designs including case study, ethnography, and phenomenology. A case study design is preferred when the purpose of the study is to explore the experiences of participants and when the researcher cannot control behavioral events (Yin, 2017). Case study offers a level of flexibility not offered by other qualitative approaches (Hyett, Kenny, & Dickson-Swift, 2014). The results of the case study may improve employees' lack of acceptance during a technological change. Other designs considered were ethnography and phenomenology. Research problems associated with ethnography typically address the shared patterns of the culture of a group (Denzin & Lincoln, 2011). The type of problem best suited for the phenomenological design is to understand the essence of participants' lived experiences (Moustakas, 1994).

Research Question

The central research question for this study was the following: What strategies do some midlevel managers use to improve employees' lack of acceptance of technological change?

Interview Questions

1. What have been the main reasons or motivations for technological changes within the organization?

2. What strategies did you use to improve employees' lack of acceptance of technological change within the organization?

3. What method worked best to improve employees' lack of acceptance during the technological change process?

4. How did employees respond to each method or technique used?

5. What strategies do you recommend managers use when attempting to improve employees' lack of acceptance of technological change?

6. What strategies or steps do you recommend managers within the organization use when introducing and implementing technological change?

7. What challenges or barriers did you have to overcome to improve employees' lack of acceptance of technological change?

8. What other additional information would you like to add regarding strategies used to improve employees' lack of acceptance of technological change within the organization?

Conceptual Framework

The technology acceptance model (TAM) developed by Davis in 1986 was the conceptual framework used for the current study. Davis (1986) developed the TAM by adapting Fishbein and Ajzen's theory of reasoned action (TRA). The TRA suggests that as rational beings, humans make the use of information available and consider implications of their behaviors before deciding to engage in behaviors (Hwang et al., 2016). The TAM is used to explain different strategies employed by users to accept technologies and how users believe productivity increases through the usefulness of the technology (Davis, 1989).

Based on TAM, the fundamental determinants that affect technology adoption are perceived usefulness and perceived ease of use (Hashim, Pandit, Alam, & Manan, 2015). Perceived usefulness refers to the way individuals perceive how the technology will improve their work performance (Hwang et al., 2016). Perceived ease of use refers to the individuals' perception of the amount of effort needed to use the technology (Hwang et al., 2016; Oh & Yoon, 2014). Since its inception, TAM has become the dominant model for explaining and predicting system use (Marangunić & Granić, 2015; Silva, 2015).

Exploration of employee resistance to technological change occurred using TAM as the conceptual framework for the current study. The TAM also provided a framework for understanding how some managers lack strategies to improve employees' lack of acceptance of technological changes. TAM informed the research question addressing strategies some managers use to improve employees' lack of acceptance of technological change.

Operational Definitions

Active resistance: Behavior that demonstrates opposition to change through engagement in behaviors that will lead to change failure (Vakola, 2016).

Active support: Behavior that demonstrates going beyond to ensure the success of the change and promotion of the change to others (Vakola, 2016).

E-services: Enable the electronic delivery of services such as online payments or online job applications (Li & Feeney, 2014).

Information technology (IT): Hardware and software used to store, access, and change information (Atoyebi, Stewart, & Sampson, 2015) and for processing and distributing data (Sears & Hoetker, 2014).

Passive resistance: Behavior that demonstrates opposition in response to change through engagement in subtle behaviors that will prevent the success of the proposed change (Vakola, 2016).

Perceived ease of use (PEOU): The degree to which individuals perceive the amount of effort needed to use the technology (Hwang et al., 2016).

Perceived usefulness (PU): The extent to which individuals perceive the technology will improve their work performance (Hwang et al., 2016).

Technology acceptance: An individual's willingness to use technology for its intended purpose (Wong, 2016).

Technology readiness: A persons willingness to learn and use technology to accomplish goals at home and work (Parasuraman & Colby, 2015).

User resistance: The intentional act or omission that results in unanticipated delays, instabilities, and costs (Ali, Zhou, Miller, & Ieromonachou, 2016); opposition to technological change (Ali et al., 2016).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are unproven assertions necessary to conduct research (Simon & Goes, 2013). Researchers must be aware of assumptions about the study design and conclusions drawn from the findings (Kirkwood & Price, 2013). In the current study, three assumptions existed. I assumed participants would provide honest, truthful responses to the interview questions. I also assumed that participants had relevant information and experiences. The final assumption was that employees' acceptance of technological change would improve as a result of the strategies used.

Limitations

Limitations can affect the outcome of the study but are beyond the researcher's control (Simon & Goes, 2013). Like assumptions, limitations may create potential weaknesses in the study (Kirkwood & Price, 2013). A limitation of this study was that causal inferences cannot occur, because alternative explanations cannot be eliminated (see Simon & Goes, 2013). Another limitation of this study was that member checking follow-up interviews occurred via the telephone. Telephone interviews posed a limitation of the study, because body language and mannerisms were not observable (see Mapesa, 2016). The organizational culture was also a limitation, because the organizational culture may have affected participants' responses to interview questions (see Starnes,

2016). Participants trusted that no repercussions would arise from leadership as a result of their participation. The final limitation was that this study included two data collection methods: interviews and documentation.

Delimitations

Delimitations are boundaries of the study that define the scope and are under the researcher's control (Simon & Goes, 2013). A delimitation of this study was that participants included managers from a local government agency in the Southwestern region of the United States. I did not interview or consider input from individuals in nonmanagement positions.

Significance of the Study

Contribution to Business Practice

I conducted this study to fill a gap in the understanding of effective business practice by providing information to allow technological changes to be successfully implemented, thereby improving operational efficiencies within the organization. As citizens demand increased services, local government agencies are more compelled to implement solutions that enable IT use (Wang & Feeney, 2016). The results of this study may assist organizational leaders in developing strategies to improve employees' lack of acceptance of technological change.

Increased community engagement, mobility, and online transactions may result in improved operational efficiencies within the organization under study. Technological solutions may improve operational efficiencies within the organization under study and in other organizations by allowing citizens to obtain information, engage with leaders of the

organization, perform tasks in a timelier manner. Technological solutions may enhance organizational communication among staff and community members through multiple channels. Organizations may also benefit from community engagement and involvement. Although the focus of this study was a local government agency in the Southwestern region of the United States, this study may benefit businesses of any type in any location by promoting technological solutions to improve business processes, procedures, and productivity.

Implications for Social Change

The results of this study may assist organizational leaders in improving operational efficiencies and productivity within the organization. By providing insights needed to integrate technological changes, leaders may use findings to increase organizational and resource allocation efficiencies to improve services provided to employees, residents, and local businesses by promoting development of and services available to the community. Harper and Leicht (2016) stated that the importance of social change includes an understanding of significant structural changes (such as the size and complexity of organizations) and the effect they have on cultural change (such as values and fears that people share). Engaging with managers to explore strategies used to improve employees' lack of acceptance of technological change may provide an understanding of the organization and the organizational culture.

Understanding significant structural changes, hierarchy, operations, culture, and employees' values and fears within an organization may provide insight into reasons some employees' lack acceptance of technological change. Findings may provide an

opportunity for efficiencies to be implemented thereby freeing up resources to benefit the

community. By promoting the worth, dignity, and development of the organization,

employees, community members, and other stakeholders, positive social change may

occur. The implications for positive social change include improving human and social

conditions for residents, expanding available services, and enabling better use of

resources to benefit stakeholders in the local community. By providing insights needed to

integrate technological changes, leaders may use findings to increase organizational and

resource allocation efficiencies to improve services to residents, local businesses,

employees, and other stakeholders by promoting development of and services available to

the community.

A Review of the Professional and Academic Literature

In this study, I performed a comprehensive and critical analysis of literature

related to technology, the technology acceptance model and other theories considered for

the conceptual framework, and factors that influence acceptance of technology. I

addressed user resistance and ways to minimize resistance and improve employees' lack

of acceptance of technological change. I also provided a critical analysis of the business

problem and strategies managers use to improve employees' lack of acceptance of

technological change.

Literature Search Strategy

The research databases that I used to locate literature included ABI/INFORM

Complete, Business Source Complete, ScienceDirect, Thoreau Multi-Database, and Sage

Journals. I also used the Google Scholar search engine and libraries from other learning

institutions that I have access to as an alumnus. Searches generated references to scholarly peer-reviewed articles. Citation chaining provided links to additional resources. The key words used to search the literature were *technology*, *resistance*, *employee*, *technology acceptance*, *TAM*, *avoid, resist*, *change*, *accept*, *reject*, and variations of each word along with wildcard characters and Bolean operators.

This study included 145 references, of which 128 (88%) were peer reviewed and 93 (64%) had a publication date within 5 years of the anticipated chief academic officer (CAO) approval in 2019. This literature review included 59 references, of which 55 (93%) were peer reviewed and 44 (75%) had a publication date within 5 years of the anticipated CAO approval date. The sources consisted of 12 books, nine dissertations, one government website, 117 peer-reviewed journals, and four non-peer-reviewed journals. I organized the literature review by themes including TAM and other theories considered, factors influencing technology acceptance, employee attitude, user resistance, and technological resistance. Behavioral reactions, possible sources of resistance, minimization of resistance, technology readiness, and techniques to assess and manage risks were also themes in the literature review.

TAM and Other Theories Considered

Technology acceptance model. The technology acceptance model (TAM) guided the research on the exploration of employee resistance to technological change. TAM originated in the psychological theory of reasoned action (TRA) developed by Fishbein and Ajzen in 1975 and theory of planned behavior (TPB; Davis, 1986; Marangunic & Granic, 2015). An information systems theory, TAM depicts how users come to accept

and use technology on the job (Martins, Oliveira, & Popovič, 2014). TAM is instrumental in understanding behavior regarding acceptance or resistance to technology (Marangunic & Granic, 2015). To develop a model that could predict use of technologies of any type, Davis adapted TRA and TPB and developed TAM (Marangunic & Granic, 2015). Davis proposed TAM to help explain and predict the adoption and use of IT at work (Bhatti, 2015).

The primary purpose of TAM is to predict an individual's behavioral intention while considering two primary technology-related determinants, PU and PEOU (Bhatti, 2015; Muk & Chung, 2015). Unlike with TRA and TPB, no consideration of subjective norms exists, only the attitude of the individual (Marangunic & Granic, 2015). TAM omits external influences that could affect an individual's behavior (Briz-Ponce & García-Peñalvo, 2015). TAM theorizes that an individual's intention to use an information system and his or her personal beliefs about the system are the most insignificant factors that determine whether user adoption will occur (Bhatti, 2015).

PU has a significant impact on use intention (Bhatti, 2015; Davis et al., 1989, Venkatesh & Morris, 2000). PU is defined as the degree to which individuals believe their task performance will be improved (Bhatti, 2015). According to multiple empirical studies, PU is the primary predictor of technology use (Bhatti, 2015; Davis, 1989; Venkatesh, 2000; Venkatesh & Davis, 2000). When determining whether a system is useful, individuals consider items such as whether the system would allow them to accomplish tasks faster, whether job performance and productivity would improve, and whether the system would make it easier to perform their job (Venkatesh, Morris, Davis,

& Davis, 2003). Perceptions of the usefulness of technology can come from conversations with coworkers and previous personal experiences with similar technologies (Treem, 2015). Individuals want to ensure the system will be useful in their specific job and will make them more effective (Venkatesh et al., 2003).

PEOU is an individual's perception that the use of technology will be free of physical and mental effort (Cho & Sagynov, 2015; Davis, 1989). An individual's PEOU is a motivator of his or her attitude and willingness to use technology, as individuals believe that using the technology would minimize their efforts to complete tasks (Hashim et al., 2015). PEOU has a direct causal effect on PU, and system design affects both perceptions (Kaushik & Rahman, 2015). When considering two systems that perform similar functions, most users would find the system that is easier to use more useful (Kaushik & Rahman, 2015).

Several studies aligned with using TAM as the conceptual model or theory. Results of an investigation of Internet banking adoption using TAM indicated that fundamental determinants such as PU and information available resulted in 12.4% of user intention (Martins et al., 2014). In an investigation of users' Internet experience applying TAM, Martins et al. (2014) reported that 32.3% of users' experience had a focus on Internet experience, PU, and PEOU. The application of TAM also was present in research addressing a blended learning system; results indicated that 31.25% of participants reported the tool useful in teaching and learning, and 20.83% reported improvement in learning-related interactions (Al-Azawei, Parslow, & Lundqvist, 2017). Research conducted addressing the effects of Internet-based comments posted by prior guests on

new business travelers' willingness to purchase hotel rooms indicated that usefulness played a significant role in a business travelers' willingness to purchase, a stronger link than ease of use (Memarzadeh, Blum, & Adams, 2016).

In a study addressing the acceptance of self-service technologies, TAM was superior to the TRA and the TPB (Kaushik & Rahman, 2015). The results of the study indicated that as individuals became more comfortable with technology, acceptance and use increased (Kaushik & Rahman, 2015). TAM has been used often in the information systems field to explore system acceptance among types of technologies and with types of users (Hwang et al., 2016). Researchers have used TAM to explore acceptance in studies addressing computer banking systems, the World Wide Web, spreadsheet software, graphics software, telemedicine, online gaming, and word-processing tools (Hwang et al., 2016).

Researchers used TAM in a qualitative study to explore IT adoption in a nursing home (Bezboruah, Paulson, & Smith, 2014). The results of semistructured in-depth interviews of management and direct observations of employee behavior showed different levels of IT adoption within the nursing facility (Bezboruah et al., 2014). Some administrators were aware of the IT systems and implemented and upgraded their systems gradually (Bezboruah et al., 2014). Other administrators showed a lack of interest in the technology and did not proactively implement the technological change (Bezboruah et al., 2014). Attributions of this difference in behavior are PU and PEOU, the components of TAM (Bezboruah et al., 2014).

Theory of reasoned action. The theory of reasoned action (TRA) was used in the

field of psychology to seek an understanding and prediction of decisions on behavior as main predictors of change, not attitudes (Marangunić & Granić, 2015). TRA theorists argued that the determining factors of behavior are an individual's personal intent to perform such behavior (Nabavi, Taghavi-Fard, Hanafizadeh, & Taghva, 2016). TRA considers the main predictors of behavior as the individual's behavioral intentions rather than the attitude, as intention may influence the attitude (Marangunić & Granić, 2015). An individual's attitude and subjective norms concerning the behavior determines his or her behavioral intention (Mishra, Akman, & Mishra, 2014).

Over time, the limitations of TRA began to appear, and many concluded the theory was inadequate. An additional element, perceived behavioral control, was incorporated into the original theory (Marangunić & Granić, 2015). The inclusion of this additional element resulted in the birth of the theory of planned behavior (Marangunić & Granić, 2015).

Theory of planned behavior. The development of the theory of planned behavior (TPB) was as an extension of TRA (Marangunić & Granić, 2015). The primary purpose of TPB was to predict and understand motivational influences on behavior that individuals do not have complete control over and the development of target strategies for changing behavior (Marangunić & Granić, 2015). This purpose of TPB was appropriate to deal with the gaps that remained unresolved when using TRA, particularly when dealing with did not have complete control of their behavior (Marangunić & Granić, 2015).

The focus of TPB was the individual's intent to perform a behavior (Marangunić & Granić, 2015). An individual's attitude affects his or her intention about the behavior, subjective norms about becoming involved, and his or her perception of how successful he or she will be (Marangunić & Granić, 2015). Perceived behavioral control and behavioral achievement are direct correlations to TPB (Marangunić & Granić, 2015; Venkatesh et al., 2003). Perceived behavioral control is a factor of attitude and refers to an individual's perception of how well he or she will perform a behavior (Wong, 2016). The primary limitation of TPB is the theory is applicable when uncontrollable behavior is involved (Marangunić & Granić, 2015). The noninclusion of factors such as personality and demographics are also limitations of TPB (Marangunić & Granić, 2015).

Innovation diffusion theory. I also considered but did not select the innovation diffusion (IDT) theory as the conceptual framework for this study. IDT is the process of communication of innovation to members of a social system through various channels over time (Ekdale, Singer, Tully, & Harmsen, 2015). Since the 1960s, IDT has been used to study a multitude of technical and nontechnical innovations (Rogers, 1995; Venkatesh et al., 2003). Seven factors relative to information systems are relative advantage, image, ease of use, compatibility, voluntariness of use, visibility, and results demonstrability (Venkatesh et al., 2003). The IDT provides clarification of how innovation adoption occurs and the underlying causes of adoption rates for those innovations (Kurfali, 2017).

Determination of the impact of innovation features on use and adoption behavior was the result of a between-subject comparison (Venkatesh et al., 2003). The results showed that ease of use, relative advantage, visibility, trialability, and results

demonstrability were the primary predictors for adoption (Venkatesh et al., 2003). Use

had two primary predictors: image and relative advantage (Venkatesh et al., 2003). IDT

was not an appropriate theory to support the current study, because the factors were not

specific to the research question.

      Unified theory of acceptance and use of technology model. Also considered for

the conceptual framework for the current study was the unified theory of acceptance and

use of technology model (UTAUT). Venkatesh et al. (2003) created UTAUT by

combining eight previous theoretical technology acceptance models. The four factors of

UTAUT that impact behavior and acceptance of technology systems are performance

expectancy, effort expectancy, social influence, and facilitating conditions (Williams,

Rana, & Dwivedi, 2015; Venkatesh et al., 2003). Gender, age, experience, and

voluntariness of use affect each of these factors (Williams et al., 2015; Venkatesh et al.,

2003). Many researchers argued that examining these factors in a natural environment

provides insight into important identifiers of user acceptance in any context (Williams et

al., 2015).

      Although UTAUT has provided significant contributions to the explanation of

behavior toward technology, limited studies have been performed in countries or cultural

settings beyond the United States (Venkatesh & Zhang, 2010). Culture has been a

significant consideration in IT research (Venkatesh & Zhang, 2010), and this limitation

may negatively influence the use of this model in other countries or within other cultures.

UTAUT was a less appropriate theory to use for the foundation of the current study.

Factors Influencing Technology Acceptance

When exploring strategies some managers use to improve employees' lack of acceptance of technological change, I determined that understanding the difference between technology acceptance and technology adoption was important. Technology acceptance is defined as an individual's willingness to use technology for its intended purpose (Wong, 2016). Technology adoption is the process of becoming aware of, embracing, and using technology (Wong, 2016). The purpose of this section is to explore factors that influence technology acceptance and not technology adoption or implementation.

Before new technology is deployed within an organization, understanding the factors that influence employee acceptance of the technology is important. To gain a better insight into employee acceptance of technology, Farokhran, Eskandarpour, Eskandarpour, and Giglo (2016) performed a study to identify factors that affected technology acceptance in companies in Tehran. The results indicated that three primary factors had a positive influence on an individual's acceptance of technology: usefulness, ease of use, and subjective norm (Farokhran et al., 2016). The results showed no positive relationship between facilitating conditions and an individual's willingness to accept technology (Farokhran et al., 2016). The results of this study were also aligned with the conceptual framework used in the current study: TAM.

Wong (2016) explored the extent teachers in Hong Kong can use technology while teaching and the major factors that affect their acceptance of the technology. The findings indicated that PEOU, PU, and computer self-efficacy were the most prominent

factors of behavioral intentions that affected technology acceptance (Wong, 2016). The results of this study also aligned with the conceptual framework used in the current study: TAM.

The results of a case study involving significant changes in a newsroom, including technological changes showed that employees approached technological change conservatively and were more willing to adapt to changes the fit into existing processes (Ekdale et al., 2015). The primary reasons were concerns about quality, training, and time pressures associated with learning and adapting to the new technology (Ekdale et al., 2015). Employees were more willing to accept new technology when he or she believed the technology would increase the quality of their work (Ekdale et al., 2015). More resistance manifested when employees perceived the technological change as damaging, disrupting or poorly communicated (Ekdale et al., 2015).

Motivation is also a significant factor that affects technology acceptance. Motivation is an inherent force that drives individuals to achieve personal and organizational goals (Shoraj & Llaci, 2015). To reduce lack of acceptance of technological change, Shoraj and Llaci (2015) suggested focusing on four fundamental factors. Role expectancies should be clear to ensure that employees understand expectations during technological change initiatives (Shoraj & Llaci, 2015). Employees should possess the required knowledge and skills needed to accomplish tasks (Shoraj & Llaci, 2015). Employees should be interested and motivated in the proposed change initiative (Shoraj & Llaci, 2015). The work environment should be one that allows employees to express their intended actions into actual behaviors (Shoraj & Llaci, 2015).

Employee Attitude

The attitude of employees toward change within the organization can significantly affect the success or failure of a change initiative or project. Attitude toward change is an employee's judgment related to the change in the implementation process within their organization (Khatoon & Farooq, 2015). This attitude can emerge from positive attitudes such as openness and willingness to negative attitudes such as resistance and pessimism (Khatoon & Farooq, 2015). Understanding employee's attitude toward change to achieve organizational goals and objectives is imperative. To overcome the complexity of technological change and use, employees must change their attitude (Yeo & Marquardt, 2015). Individual factors, change content, change process, and change context all influence employee's attitude toward organizational change (Khatoon & Farooq, 2015).

Individual factors such as control and self-efficacy impact employee's attitude toward change as employees tend to behave differently to changes similar or familiar to previous experiences (Khatoon & Farooq, 2015). Individuals often believe he or she have control of individual factors, but that is not always the case (Khatoon & Farooq, 2015). Regardless of the level of control, employees should be held accountable for their actions related to the lack of acceptance (Yeo & Marquardt, 2015). Threat appraisals are examples of change content factors that impact or shape an employee's attitude toward change (Khatoon & Farooq, 2015). Soliciting feedback from employee's regarding the proposed change may provide information about how a proposed change could affect the employee's attitude and performance (Khatoon & Farooq, 2015).

Change process factors are measures used to encourage employees to meet organizational performance goals (Khatoon & Farooq, 2015). For highly competitive employee's, change process factors are used to encourage engagement in change efforts and can aid in the achievement of organizational goals (Khatoon & Farooq, 2015). Change context factors are those that influence organizational performance from an organizational, not employee perspective, including organizational policies, standards, employee uniformity, politics, and regulations (Khatoon & Farooq, 2015).

User Resistance

Living in a world of rapid technological change, we are required to learn, engage with, and incorporate forms of technology that exist around us during work and leisure (Darr, 2016). When exploring strategies managers can use to improve employees' lack of acceptance of technological change using TAM as the conceptual framework, understanding the concept of user resistance is important. Employee resistance is a primary factor that influences system innovation failure within organizations (Shahbaz, Gao, Zhai, Shahzad, & Hu, 2019). The definition of user resistance is the intentional act or omission that results in unanticipated delays, instabilities, and costs (Ali, Zhou, Miller, & Ieromonachou, 2016). An additional definition of user resistance is opposition to technological change (Ali et al., 2016). The five basic resistances to change are remaining confident with the status quo, misunderstanding the need to change, lack of communication, lack of commitment, and inability to change (Pourrajab, Basri, Daud, & Asimiran, 2015). Lack of acceptance of technical change can also be attributed to employees' lack of skills, fear of being replaced by the technology, or fear of making

mistakes using the technology (Thordardottir, Fänge, Lethin, Gatta, & Chiatti, 2019).

Resistance to changes stems from two primary sources: organizational factors and individual factors (Mo & He, 2015). Organizational factors include lack of management support, lack of budget, difficulty in coordinating project-related efforts, and the amount of time spent on the change effort (Mo & He, 2015). Individual factors include lack of training, lack of technical skills, and limited knowledge of the proposed technical solution (Mo & He, 2015). Other sources of resistance can include lack of resources and capabilities to implement change, embedded routines, and lack of action from leadership (Ali et al., 2016). Regardless of the source, intended and unintended consequences of technological change resistance exists, and employees should be aware of them and held accountable for their actions (Yeo & Marquardt, 2015).

About formulation and implementation, segmentation of user resistance occurs in five groups (Ali et al., 2016). The three groups that deal with formulation are distorted perception, low motivation for change, and lack of creative response. The groups that deal with implementation are political and cultural deadlock and other sources of resistance (Ali et al., 2016). Distorted perception includes vague strategic priorities, denial and refusal to accept unwanted or unexpected information, and the inability to forward think during changing times (Ali et al., 2016). Low motivation for change includes varying levels of interest within an organization, past failures, and sacrifices that may benefit the project but may bring losses to people (Ali et al., 2016). Lack of creative response includes inadequate strategic direction from upper management and environmental changes that do not permit complete analysis of the situation (Ali et al.,

2016). Political and cultural deadlock is the result of departmental politics, emotional loyalty, and disagreements among members (Ali et al., 2016).

As complex as the concept of resistance to change is, resistance is a naturally occurring phenomenon (Latta, 2015). The concept of resistance is categorized into five causative factors (Muo, 2014). Employees resisting or voicing concerns when he or she disagree with the management about the benefit of the change is a rational, causative factor (Muo, 2014). Individuals reacting negatively because of their beliefs or desire to keep technology, their environment, or tasks the same is a nonrational causative factor (Muo, 2014). Displaying opposition to the change agent or favoritism is a political causative factor (Muo, 2014). Inappropriate or poor management style is also a causative factor (Muo, 2014). The final causative factor is organizational and occurs when factors such as sunk costs, systems, and processes create a situation that influences the organization toward increased reliability or predictability, thereby acting against the proposed change (Muo, 2014).

In the IT sector, resistance consists of any behavior that attempts to impede technological implementation or use. User resistance may be recognizable at times, but often is not (Ali et al., 2016). Often, this behavior is displayed when the threat of unfairness is present or the belief that such change may increase workloads (Ali et al., 2016; McGuinness, & Cronin, 2016). User resistance also occurs when employees' fear that levels of supervision will increase, because of the new technological change (McGuinness, & Cronin, 2016). Change in supervision and workload creates an

opportunity for organizational change, which creates additional resistance (McGuinness, & Cronin, 2016).

Additional factors that cause resistance are fear of loss of authority, competition, habit, fear of change, loss of familiar situations, and dependence (Pourrajab et al., 2015). Employees also resist change when he or she fear a loss of pay, benefits, prestige, and do not fully understand the intent of the proposed change (Sofat, Kiran, & Kaushik, 2015). A common assumption made is that fundamental factors that help minimize resistance will inevitably cause the facilitation of change (Latta, 2015). Because minimizing resistance does not guarantee facilitation of change, understanding the perspectives of resistance is important. Insight into resistance can occur from three perspectives: people oriented, system-oriented, and interaction theories (Ali et al., 2016).

People oriented. The people-oriented approach suggests that user resistance is a result of individual or group backgrounds, experiences, and attitudes toward technology (Ali et al., 2016; Li, Liu, & Liu, 2016). As users become accustomed to and comfortable with systems they have used for years, an increase in resistance to the newly proposed technology may occur. When this occurs, the resistance is often from a group and not individuals (Ali et al., 2016). Resistance at a group level is often the result of socio-political issues but individual level resistance is often psychological (Ali et al., 2016). Regardless of the level or cause of resistance, each requires a strategy to minimize such resistance (Ali et al., 2016).

Resistance is identifiable as functions of factors such as rational factors, nonrational factors, political factors, and management factors (Ali et al., 2016). Rational

factors include a difference of opinion about what the expected outcome of the technological change should be (Ali et al., 2016). Nonrational factors include reactions to proposed changes based on personal desires without a thorough understanding of the need for the change (Ali et al., 2016). Political factors include favoritism (Ali et al., 2016). Management factors include inappropriate management styles that contribute to or create the resistance (Ali et al., 2016).

Some suggest that an individual's response to technological change has a direct correlation to personality factors such as user age, educational level, perceived need, and degree of expected use of IT (Ali et al., 2016). In general, younger users and more educated users tend to be more open to technological change (Ali et al., 2016). Likewise, users that need a new IT system are more open to accepting the change (Ali et al., 2016). Users that conclude their work productivity and performance will improve from the new technology are more open to accepting it and are less resistant (Ali et al., 2016).

System-oriented. The system-oriented approach suggests that user resistance occurs, because of technology-related factors (Ali et al., 2016). These factors include items such as user interface, ease of use, performance security, and centralization (Ali et al., 2016; Li et al., 2016). The factors of TAM, PEOU and PU are contributing factors in the system-oriented approach. Systems that do not have user-friendly interfaces are not easy to use or learn, crash frequently, or respond too slowly contribute toward the negativity of users and cause user resistance (Ali et al., 2016). Similarly, systems that have data quality issues or produces invalid outputs can also contribute toward the negativity of users and cause user resistance (Ali et al., 2016).

If the initial response of a user to a newly implemented system is that the system is unfriendly and difficult to use, users will avoid it (Ali et al., 2016). On the contrary, if users perceive the new system as a tool that will improve their tasks and performance, user resistance will subside, and users will be more open to embracing and using the technology (Ali et al., 2016). User involvement during the design and implementation process can minimize user resistance at the end (Ali et al., 2016). The inclusion of users at the beginning of the process allows involvement in the decision-making and development process. Development will occur that meets the technical requirements of the application and factors in the extent of the impact on end users' jobs (Ali et al., 2016). Consideration of factors such as availability, accessibility, and the hosting of an application on premise or offsite should occur when addressing the issue of system reliability and stability.

Interaction oriented. The cause of resistance to a new system under the interaction-oriented approach is characteristics related to the system and people (Ali et al., 2016). Under this approach, individuals perceive the interaction between people and technology causes social loss (Ali et al., 2016; Li et al., 2016). These interactions such as job structure, social structure, and changing power relationships all impact user resistance (Ali et al., 2016). Employees often believe IT systems reduce autonomy, which also leads to user resistance (Ali et al., 2016). The final most significant issue that may be present is uncertainty. When users are uncertain, decision-making and behavior is impacted as users are negatively reacting to individual beliefs of incompetence (Ali et al., 2016). Individuals resist the uncertainty, and potential outcomes the change can cause, not

necessarily the change (Ali et al., 2016).

Technological Resistance

Technological resistance includes the concept of user resistance but also considers the resistance to the technology and IT staff's resistance to innovation (Nilsen, Dugstad, Eide, Monika, & Eide, 2016). In IT, resistance to technology is expected and is not completely harmful (Nilsen et al., 2016). In many cases, technology challenges an employee's sense of predictability, competence, and professionalism (Nilsen et al., 2016). These challenges create a sense of fear of learning a new technology, which often portrays as resistance (Nilsen et al., 2016).

IT infrastructure may also interfere with the implementation of technological change (Nilsen et al., 2016). Network outages, poor reliability, antiquated infrastructure, and limited infrastructure can obstruct and limit technological change within an organization (Nilsen et al., 2016). IT support staff's reluctant or uncooperative attitudes can also contribute to resistance to technological change (Khatoon & Farooq, 2015; Nilsen et al., 2016). Often, IT staff deal with contradictory expectations between maintaining systems, safety, and stability with the desire to allow innovation, which creates instability within the infrastructure (Nilsen et al., 2016).

Over an extended period, resistance can have negative consequences for the organization. The primary consequences are the diminishment of the employees' perception of the organization and the organization's effectiveness (Jones & Van de Ven, 2016). Employees' that resist and view change negatively, often view the organization and their fit within it negatively resulting in lower performance and productivity (Jones &

Van de Ven, 2016). These perceptions and the negative associated assertions become stronger over time, leading to stronger resistance (Jones & Van de Ven, 2016). If not dealt with appropriately and promptly, resistance can spread throughout the organization and cause significant harm (Jones & Van de Ven, 2016).

For resistance to minimize and organizations to succeed, employees must change (Jones & Van de Ven, 2016). Employees must think and behave differently and leaders within the organization must engage in supportive behaviors (Jones & Van de Ven, 2016). Supportive behaviors that could minimize resistance include but are not limited to open communication and employee involvement during the change process (Canning & Found, 2015). The described change may help minimize the impact such resistance has on the organizational performance and productivity. Organizational cultures open to change and flexible are often more innovative and accepting of change (Nguyen, Newby, & Macaulay, 2015). Technological changes in these flexible cultures are most successful (Nguyen et al., 2015).

Information employees possess about the organization is valuable. Prior organizational knowledge enables employees to understand and evaluate the new information. Without prior knowledge, employees would not absorb the new information associated with the technological change (Mariano & Casey, 2015). Resistance has a direct correlation to organizational knowledge loss and dissipation, which can lead to poor implementations, loss of time, and loss of money, because of inaccuracies, stress, and other conflicts (Mariano & Casey, 2015).

Behavioral Reactions

Behavioral reactions are direct behaviors associated with change (Vakola, 2016). The categorization of behavioral reactions is active support, passive support, active resistance, and passive resistance (Vakola, 2016). These behaviors are representative of an employees' response to change and can range from actively supporting a change to opposing and attempting to sabotage it (Vakola, 2016). Regardless of the behavior, a Manager's role is to implement goals and strategies that help extract the most productivity from the workforce (Darr, 2016).

Active support is behavior that demonstrates going beyond to ensure the success of the change and promotion of the change to others (Vakola, 2016). This behavior is the result of job satisfaction, anticipated benefits, lack of alternatives, and trust in management (Vakola, 2016). Passive support by definition is behavior that demonstrates minimum, average, or reluctant support of the change (Vakola, 2016). This behavior is the result of self-esteem, young age, anticipated benefits, and lack of alternatives (Vakola, 2016).

Active resistance is behavior that demonstrates opposition to change through engagement in behaviors that will lead to change failure (Vakola, 2016). This behavior is the result of high cost-low benefits, satisfaction with the previous system, self-esteem, and anticipated benefits (Vakola, 2016). Active resistance includes behaviors such as voicing opposite opinions, the formation of coalitions, strikes, boycotts, and sabotage (Canyon, 2014). Passive resistance is behavior that demonstrates opposition in response to change through engagement in subtle behaviors that will prevent the success of the

proposed change (Vakola, 2016). This behavior is the result of high cost-low benefit, alternatives, competencies related to the change, and self-esteem (Vakola, 2016). Passive resistance includes behaviors such as lack of interest, excuses, inaction, distance, and withdrawal (Canyon, 2014).

Possible Sources of Resistance

While exploring employee resistance to technological change, understanding possible sources or causes of resistance is important. In a study addressing faculty resistance to online teaching, cultural assumptions and values; fear of the unknown, loss and failure; fear of disrupting interpersonal relationships; and concerns of external impact on change as were identified as possible sources of resistance (Mitchell, Parlamis, & Claiborne, 2015). Instead of viewing resistance as a negative action or reaction, Mitchell et al. (2015) suggested viewing resistance as a positive hope about the upcoming change with concerns about possible negative effects of the change. Without understanding the cause or source of resistance, turning resistance into acceptance is impossible.

Because local government agencies are not typically early adopters of technology, understanding the cultural assumptions and values source of resistance is important. Cultural assumptions and values involve an individual holding onto a historical perception (Mitchell et al., 2015). As local government has a reputation for maintaining the status quo, this source encompasses a mindset of continuing to perform tasks the same way they had been performed in the past. Resistance to technology that would enable automated citizen engagement and interaction is an example of cultural assumptions and values sources of resistance. Because traditional methods of engaging

with local government is in a face-to-face setting, which often does not involve the use of technology, providing information about new and innovative technologies may provide insight into the benefit of the new technology thereby leading to acceptance (Hashim et al., 2015).

Fear: fear of the unknown, fear of loss, or fear of failure is a possible source of resistance (Mitchell et al., 2015). Most often feared is the technology. This fear is a result of an individual beliefs of not knowing how to use the proposed technology. Employees may also fear the amount of time it would take to learn the technology, losing comfort in how daily tasks or processes are performed, fear of losing control of the way he or she operate, and fear of failing to learn how to use the technology. Mitchell et al. (2015) reported that this source of fear is typically generational and suggests addressing it through training and other immersion strategies.

Fear of disruption of interpersonal relationships is also a possible source of resistance. In the study addressing faculty resistance to online teaching, a technologically different approach from the traditional method, Mitchell et al. (2015) reported that teachers feared the loss of personal relationships with students. In a local government agency, employees may fear the loss of personal relationships with peers and citizens. Daily interactions with peers and customers often develop into lifelong friendships (Mitchell et al., 2015), which technology may disrupt.

Concern about external impact is a possible source of resistance. Under this source, individuals fear the impact the change may have on the reputation of the organization and personal future employment prospects (Mitchell et al., 2015). The fear

within a local government agency when implementing technological change could be that community members would view the transition of services from in person to online as less personal thereby causing the perception of the agency to seem unfriendly and less customer service oriented to customers. Employees may then fear that the reputation of the agency would prevent others from wanting to hire them in the future, because of their association with the agency during their prior employment.

Minimization of Resistance

To reduce resistance, an analysis of the current situation including but not limited to people, processes, structure, employee values and beliefs, and culture should occur (Stolnik et al., 2016). Employees should have access to review the results of the analysis to help them understand the reasons for the proposed change (Stolnik et al., 2016). Once understood, employees can then help identify possible consequences of the proposed change (Stolnik et al., 2016). Employees can easier accept change when he or she understand it (Stolnik et al., 2016). One should view change as what changes and what stays the same as opposed to just focusing on what is changing (van Nistelrooij & de Caluwé, 2016). By focusing on what remains the same, employee behavior may transition from resistance to acceptance.

Regardless of the type of change presented in an organization, change may be successful if employees engage, accept, and commit to change (Stolnik et al., 2016). Management must understand the close relationship between employee's resistance to change, and the effect it has on their behavioral intention, which will impact their willingness to use the newly proposed technology (Huang, 2015). When change benefits

employees', reduction or elimination of resistance occurs (Stolnik et al., 2016). As a rule, people are more likely persuaded to accept change when advocated by people considered powerful, trustworthy, attractive, an expert or of the same social group as themselves (Jost, 2015). People are more likely to resist change when the advocate has a reputation of being untrustworthy, unattractive, and dissimilar to themselves (Jost, 2015). Communication is imperative, and leaders within the organization should advocate change and technology adoption via dialogue with staff (Oyelude & Oladele, 2014).

Technology Readiness

Technological changes have caused a service delivery revolution and will continue in the years to come. In 2013, 2.7 billion people worldwide had Internet access and 6.8 billion mobile cellular subscriptions worldwide (Parasuraman & Colby, 2015). Social media is also revolutionizing the world as Facebook alone had over 1 billion subscribers in 2012 (Parasuraman & Colby, 2015). Local government agencies must determine technology readiness, identify motivators to encourage technology adoption, and be aware of inhibitors that may cause resistance to technological change. By doing so, citizens will receive services they expect, and productivity will increase, which in turn increases profitability within the organization. To become aware of our ignorance will increase our wisdom (Nonaka, Chia, Holt, & Peltokorpi, 2014), thereby increasing technology acceptance and increased organizational profitability.

Parasuraman and Colby (2015) defined technology readiness as a persons willingness to learn and use technology to accomplish goals at home and work. Technology readiness comprises mental motivators and inhibitors that eventually lead to

resistance to technological change (Parasuraman & Colby, 2015). Technology readiness

consists of four dimensions: optimism, innovativeness, discomfort, and insecurity

(Parasuraman & Colby, 2015).

Optimism and innovativeness are motivators that contribute to technology

readiness and acceptance (Parasuraman & Colby, 2015). Optimism is a positive view of

technology and a belief that the technology will create increased efficiency, control, and

flexibility (Parasuraman & Colby, 2015). Innovativeness is the tendency to be a thought

leader and technology pioneer (Parasuraman & Colby, 2015). Technology motivators are

those that lead to improving the quality of life, improving social influence, enabling

individuals to stay connected, empowerment, and are entertaining or amusing

(Parasuraman & Colby, 2015). When considering technological change, empowerment is

important as it allows employees to experience a sense of control about their work and

involvement in the technology change initiative (Morin, Meyer, Belanger, Boudrias,

Gagne, & Parker, 2016).

To the contrary, discomfort and insecurity are inhibitors that detract from

technology readiness and may cause resistance (Parasuraman & Colby, 2015).

Discomfort arises when an individual is overwhelmed by the technology and believes he

or she lack control over it (Parasuraman & Colby, 2015). Insecurity arises from distrust

of technology and skepticism about its ability to work properly (Parasuraman & Colby,

2015). Technology inhibitors are those that create lack of confidence, dependency,

security and safety concerns, the risk of early adopters, and cost barriers (Parasuraman &

Colby, 2015).

Techniques to Assess and Manage Risks

Just as resistance must be assessed and managed in technology projects, so must risks, because they affect the success of the project and may cause additional resistance. The success of larger technical projects requires the involvement of all stakeholders, both internal and external (Durney & Donnelly, 2015). To help achieve this success, Durney and Donnelly (2015) recommend six techniques to provide the appropriate control and flexibility when managing technology projects. By implementing these techniques, resistance will minimize, and the project management and implementation will be successful.

When implementing technological change, managers should define and understand the associated risks (Durney & Donnelly, 2015). Stakeholders, including employees, understanding and agreeing to risks associated with the technological change or project is important (Durney & Donnelly, 2015). The change agent or project manager should develop a list of operating principles, and all should abide by them (Durney & Donnelly, 2015). Risk management should extend to include and focus on technological change for the duration of the project (Durney & Donnelly, 2015).

The project manager should define the new personnel guidelines for preparing for and managing the upcoming change (Durney & Donnelly, 2015). Adapting to a new flexible management style is required (Durney & Donnelly, 2015). A significant focus on the business starting from the outward should occur (Durney & Donnelly, 2015). A focus to design for resiliency including building for capacity, managing the time frame, minimizing complexity, and identifying, isolating, and monitoring embedded intelligence

must exist (Durney & Donnelly, 2015). The final technique requires a cultural development that supports innovation (Durney & Donnelly, 2015). This technique includes rewarding learning, encouraging innovation and defining project roles (Durney & Donnelly, 2015). An increased focus on establishing communication with technical and nontechnical staff and increasing information flow also exists (Durney & Donnelly, 2015). Increased communication and information flow will lead to increased communication throughout the organization, minimizing resistance and increasing successful implementation of technological change.

Transition

Section 1 included the foundation of the study, the background of the problem, and the problem statement. The purpose statement, nature of the study, research question, and interview questions were also components of Section 1. The final components of Section 1 were the conceptual framework, operational definitions, assumptions, limitations, and delimitations, the significance of the study, and a review of the professional and academic literature.

Section 2 progressed from the focus on the problem statement, purpose statement, research question, interview questions, conceptual framework, and the literature review. Section 2 included the reintroduction of the purpose statement. Section 2 also included discussions of the role of the researcher, participants, research method, research design, population and sampling and ethical research. Section 2 concluded with a discussion of data collection instruments and techniques, data organization technique, data analysis, reliability, and validity.

In section 3, I focused on the application to professional practice and implications for change. Beginning with an introduction, I reiterated the purpose of the study and provide a presentation of the findings. I included discussions of the applications to professional practice, implications for social change, recommendations for action, and recommendations for further research. In Section 3, I reflected on my experience in the DBA Doctoral Study process followed by a formal conclusion.

Section 2: The Project

Section 2 includes a reintroduction of the purpose statement, a discussion of the role of the researcher, and a discussion of the participants. Section 2 also includes discussions of the research method, research design, population and sampling, and ethical practices. A discussion of data collection instruments and techniques, data organization technique, data analysis, reliability, and validity are also included. Section 2 concludes with a transition and summary.

Purpose Statement

The purpose of this qualitative single case study was to explore strategies some midlevel managers use to improve employees' lack of acceptance of technological change. The targeted population included five midlevel managers from a local government agency in the Southwestern region of the United States who had successfully implemented strategies to improve employees' lack of acceptance during technological changes, which resulted in increased organizational productivity. The implications for positive social change included improving work products and conditions for employees, and human and social conditions for residents of the local community. By providing insights needed to integrate technological changes, leaders may use findings to increase organizational and resource allocation efficiencies to improve services to employees, residents, and local businesses by promoting development of and services available to the community.

Role of the Researcher

An important part of the study was the role of the researcher. My primary role was to conduct interviews with volunteer participants. In qualitative research, the researcher serves as the primary data collection instrument (Glynne, 2015; Pessu, 2015; Rabogadi, 2017). In this study, I served as the primary data collection instrument as the role of the researcher demands in qualitative research.

Personal and professional relationships established during my prior employment at the local government organization may have influenced individuals' willingness and interest to participate. I interacted with participants daily and may have had involvement with projects worked on where participants improved employees' lack of acceptance of technological change.

The role of the researcher is also to have a sympathetic understanding of the participant's experiences while maintaining ethical standards and impartiality (Childs, 2017; Hardicre, 2014; Yilmaz, 2013). According to the Belmont Report, the focus is on three basic principles: respect for persons, beneficence, and justice (U.S. Department of Health and Human Services, 1979). The treatment of individuals as autonomous agents with protection, including individuals with diminished autonomy (U.S. Department of Health and Human Services, 1979), shall occur to ensure compliance with the respect for persons principle. To comply with the respect for persons principle, I treated individuals as autonomous agents with protection. Beneficence occurs through respect of decisions, protection from harm, and efforts to secure participants' well-being (U.S. Department of Health and Human Services, 1979). In addition to ethical treatment, respect of decisions,

and protection from harm, I ensured beneficence by making efforts to secure participants'

well-being. Justice is ensured through the equal treatment of all participants (U.S.

Department of Health and Human Services, 1979).

Qualitative researchers should maintain awareness of possible personal biases and

ensure that bias does not influence the study findings (Miller, 2017; Robinson, 2014). I

maintained such awareness and ensured that bias did not influence the study findings. I

mitigated bias by asking the same questions of each participant and by using interview

questions that by design would not encourage a specific response. Understanding the

difficulty to separate myself from the research, I mitigated concerns and recognized my

role in the study to enhance reliability and used an interview protocol to guide the

interview process (Appendix). Delivery of a thorough explanation of the study, interview

process, use of data collected, obtainment of informed consent, and disclosure of any

ethical concerns should occur to mitigate any bias (Miller, 2017). To mitigate bias, I

thoroughly explained my study, interview process, use of data collected, informed

consent, and ethical concerns regarding my participation.

The rationale for the interview protocol was to engage participants in an

experience, which participants were eager to share information about strategies used to

improve employees' lack of acceptance of technological change. The goal was to use a

protocol that was easily understood and comfortable for all participants. Each interview

began with an introduction, which I provided rights information and shared the central

purpose of the interview with each participant. A printed copy of the interview questions

(Appendix) was provided to each participant. I asked each participant a warm-up

question followed by documented interview questions. The electronic recording of interviews transpired using two electronic devices to ensure that data were clear for use during the transcription process. During the transcription process, I performed member checking to ensure accuracy and validity of the information gathered during the data collection process. Identification of common themes allowed for coding. Nonverbal communication was documented, followed by an offer to repeat any of the interview questions. I concluded with a thank-you to each participant.

Participants

Eligibility criteria for participants in this single case study was each participant must have been a manager in a mid-management position and employed for a minimum of 1 year with the local government agency. Participants must have been successful with implementing strategies to improve employees' lack of acceptance during a successful technological change. A two-stage purposive sampling technique was used to ensure a diverse selection of participants who met criteria established in the research question and represented multiple departments within the organization (Ram, Kurpad, & Swaminathan, 2014). Purposive sampling was used to select a portion of the population that represents the entire population and to ensure participants possessed information related to the research question and were willing to provide information based on their knowledge or experience (see Pacho, 2015).

Inclusion and exclusion criteria specify characteristics that determine eligibility to participate in the study and establish boundaries for the sample (Robinson, 2014). The inclusion criteria for participation in this study was participants must have been mid-

management managers, employed with the local government organization for a minimum of 1-year, willing participants, and have implemented strategies to improve employees' lack of acceptance of technological change. Exclusion criteria were managers who were not in mid-management, employed with the organization for less than 1 year, involved in change in which no resistance existed, or involved in technology change that was not a part of the project scope. The target population included all individuals within the organization who met the inclusion criteria (see Robinson, 2014; Miller, 2017).

To gain access to participants, I sought authorization from Walden University's institutional review board (IRB). I shared a copy of proof of IRB authorization with the city manager of the local government organization and requested a letter of cooperation. Strategies for gaining access to participants included the use of the company roster, e-mail, telephone calls, and in-person visits. Before inviting participants to participate, I excluded employees employed for less than 1 year and employees who held management positions but did not directly manage employees. Prospective participants received an e-mail from me containing information about the study, permission to conduct the study, and a consent form. Follow-up contact was conducted via e-mail and phone calls with prospective participants who did not respond within five business days.

Identifying strategies to establish a working relationship with participants along with the actual working relationship was crucial to the success of the study. A solid relationship between the researcher and participants is important for each to become acquainted, to share information, and for data collection to occur (MacDonald & Montford, 2014; Rabogadi, 2017). At the beginning of the meeting, I introduced myself

to each participant, explained the purpose and importance of the study, obtained

permission to conduct the study with them, and explained the process for participating in

the study. Because participant contact is important (Marshall, Cardon, Poddar, &

Fontenot, 2013), I spent a sufficient amount of time with each participant to ensure each

had a thorough understanding of the role of the participant and the data collection

process.

Ensuring ethical conduct requires building rapport, establishing trust, and

maintaining confidentiality with all participants (McDermid, Peters, Jackson, & Daly,

2014). To ensure ethical conduct, I maintained a focus on building rapport, establishing

trust, and maintaining confidentiality with all participants. Participants had to be willing

to participate in this study without financial compensation or any other noncompensatory

benefit.

Research Method and Design

Research method and design are critical components of a doctoral study. The

selection of the appropriate method and design to answer the research question was a

primary focus. For the current study, a qualitative single case study was appropriate to

explore strategies managers use to improve employees' lack of acceptance of

technological change.

Research Method

When conducting research, three research methods are available: qualitative,

quantitative, and mixed-methods. The qualitative approach allows researchers to use in-

depth data collection techniques and multiple sources of information to explore a real-life

case or cases to derive themes (Dasgupta, 2015; Hyett et al., 2014). Using the quantitative

approach, researchers use numerical data and statistical analysis to generalize results to

the population of interest. Mixed-methods research allows the researcher to combine

qualitative and quantitative methods in data collection and analysis to answer the research

question (Bazeley, 2015).

Using the qualitative method, researchers can analyze data subject to

interpretations while understanding that individual experiences may lead to different

understandings (Harland, 2014). Researchers can also focus on how something occurs

rather than on the outcomes or results obtained (Dasgupta, 2015). Unlike quantitative

research, qualitative research is descriptive and exploratory and allows researchers to

stimulate further research to understand phenomena (Cronin, 2014). To explore strategies

some managers use to improve employees' lack of acceptance of technological change, I

elected to use the qualitative method.

Research Design

Research design is a plan that guides the researcher in collecting, analyzing, and

interpreting data in the research process (Dasgupta, 2015). Case study design is a

systematic inquiry into single or multiple events that provide the researcher with an

explanation of the phenomenon in question (Cronin, 2014). Regardless of the number of

issues requiring exploration to understand the central phenomenon, case studies can have

multiple perspectives and the researcher must consider all aspects of the interaction with

participants: voice, interaction, and the context of how interactions occur (Cronin, 2014).

In qualitative research, researchers may elect to use case study, phenomenological, ethnographic, or narrative design. The research question and phenomenon explored helped determine the appropriate design. Researchers may elect to use many different case study designs including exploratory, explanatory, descriptive, single, multiple, embedded, or holistic (Almutairi, Gardner, & McCarthy, 2014). Researchers can employ multiple methods and data sources to engage varying perspectives on a problem, providing a new understanding about the research problem through case study design (Almutairi et al., 2014). For the current study, a single case study was suitable to explore strategies some managers use to improve employees' lack of acceptance of technological change.

Other qualitative designs deemed unsuitable for the current study were phenomenological, ethnographic, grounded theory, and narrative. Phenomenological designs are conducted to explore participants' experience (Lewis, 2015). Because strategies managers use was the focus of the research question in the current study and not the experience of the employee, phenomenology was not suitable for this study. The primary purpose of ethnographic inquiry is to explore a cultural context (Lewis, 2015). Because cultural context was unimportant in this study, ethnographic inquiry was not suitable. Lewis (2015) described grounded theory designs as those addressing causal and intervening factors. Because casual and intervening factors were not a focus of the research question in the current study, grounded theory was not suitable. The narrative design was not suitable, because the focus of the current study was not to examine individual stories to relay messages (see Lewis, 2015).

Data saturation is essential in qualitative research. According to Fusch and Ness (2015), data saturation occurs when no new data, themes, or codes emerge and when replication of the study is possible. Throughout the current study, I asked probing questions and conducted interviews until the same information appeared with minimal or no variations. Redundancy in data indicates data saturation. I performed member checking and methodological triangulation to ensure reliability, validity, and saturation of data.

Population and Sampling

The target population for the current study included managers in a mid-management position employed for a minimum of 1 year with the local government agency. The study population is the total number of people within the organization eligible for sampling consideration in the interview study (Cleary, Horsfall, & Hayter, 2014; Robinson, 2014; Yin, 2017). In this study, the population was 12 managers in the local government organization who met the selection criteria for the single case study. Each participant had to be a manager in a mid-management position, be employed for a minimum of 1 year with the local government agency, and have direct knowledge of and experience with implementing strategies to improve employees' lack of acceptance during a successful technological change. The population sample consisted of five managers who managed employees during a successful technological change.

To select participants for this qualitative single case study, I used purposive sampling. Researchers can choose participants based on preferences or expectations when using the purposive sampling technique, an appropriate technique for use in qualitative

research (van Hoeven, Janssen, Roes, & Koffijberg, 2015; Yin, 2017). In the current

study, the preference or expectation was that participants were in mid-management

positions, have been employed with the local government organization for a minimum of

1 year, and have had experience directly managing employees involved in technological

change. Using the purposive sampling technique ensured a diverse selection of

participants met criteria established in the research question, multiple departments within

the organization were represented, and participants possessing information, and

experience related to the research question were chosen (Pacho, 2015; Ram, 2014). Using

purposive sampling, I selected a portion of the population that represented the entire

population.

The approximate number of people that met the participant criteria within the

current study's population was twelve. The target population included five managers of

the local government organization. Researchers recommend sample sizes that range from

5-12 participants in qualitative research (Marshall & Rossman, 2016; Robinson, 2014;

Yin, 2017). The sampling strategy and sample size helped achieve data saturation by

ensuring enough participants are interviewed to allow an opportunity to gather redundant,

applicable information. I recruited participants in mid-management positions that also

supervise employees. The focus on supervising employees was important, because not all

managers have direct reports so managers that did not also supervise employees would

not have provided beneficial information for the current study.

Within the current study, the focus remained on obtaining accurate and valid data

to ensure data saturation. Data saturation is essential in qualitative research and occurs

when no new data, coding, or themes arise, and the replication of the study is possible (Elo et al., 2014; Fusch & Ness, 2015; Morse, 2015a). The Interview Protocol and interview questions reflected in Appendix were followed during face-to-face interviews. Interviews took take place in a comfortable environment, and the digital recording of the interviews ensured accuracy during transcribing. Member checking follow-up interviews permits the review and interpretation of the interview transcripts and ensure data saturation is met (Marshall & Rossman, 2016). After the initial interview, member checking follow-up interviews were conducted. Transcripts were edited and this process continued until data saturation was reached.

Ethical Research

When conducting research, researchers must prepare for ethical issues that may arise. Qualitative research involves informed consent (Yilmaz, 2013). The primary purpose of informed consent is to mitigate risk (Wallace & Sheldon, 2015). Informed consent creates the bond of trust, which is the foundation of qualitative research and an integral part of The Belmont Report (Mandal & Parija, 2014). As stated by Mandal and Parija (2014), I was responsible for ensuring participants understood informed consent and that all information contained was true regardless of how important or unimportant the information seemed.

The informed consent process began with seeking IRB approval and distributing the Invite Letter and Informed Consent Form to each prospective participant. The informed consent form informed participants of: (a) the purpose of the study, (b) participant criteria, (c) that participation is voluntary, (d) participants can withdraw at any

time, (e) identification and responses are confidential, and (f) of the storage of data for a period of five years in a safe location. I obtained a letter of cooperation from the local government agency to ensure understanding of the study and willingness to engage in the research as a community partner. The Walden IRB approval number is 11-12-18-0063168.

Obtaining informed consent and disclosing any ethical concerns regarding participation mitigates bias and ensures compliance with ethical requirements (Mandal & Parija, 2014; Miller, 2017). To mitigate any bias and ensure compliance with ethical requirements, I gained informed consent and disclosed any ethical concerns regarding my participation. As important, I focused on the notion of gaining trust with participants while being mindful of those that benefit from the study and those that may be disadvantaged. I followed the protocols of the Belmont Report and ensured participants fully understood their role in the research and that he or she could withdraw from the study participation at any time.

To withdraw from the study, participants needed to provide notification in a verbal or written manner. Participants could contact me in person, via telephone, or via e-mail to inform me of their desire to withdraw from the study and would not be penalized for withdrawal. If a participant elected to withdraw, I would exclude data collected from that participant from the study; destruction of the data would occur immediately. Participants would not receive compensation of any kind for participation in the study nor would he or she receive any other type of incentive for their participation. Not

compensating or incentivizing participation ensures respect for persons is maintained and all participants are volunteers.

Research did not occur before the receipt of IRB approval to ensure compliance with ethical requirements related to research. The informed consent process was imperative to qualitative research and ensuring compliance with ethical requirements. I thoroughly reviewed and provided each participant with a copy of the Invite Letter and Informed Consent Form. I explained the purpose of the study, the interview process, and informed participants the study would not include names or any other identifiable information of individuals or the organization.

The assignment of unique identifiers such as P1, P2, etc. replaced participant names to maintain participant confidentiality and are not traceable back to the participant (Becnel et al., 2016; Erlich & Narayanan, 2014; Ostergren et al., 2015). Ethical protections to protect participants, the organization, and data collected existed throughout and beyond completion of the study. All data collected about the study will remain in a safe place for five years to protect rights of participants.

Data Collection Instruments

Data collection instruments are essential components of a qualitative single case study. A case study requires multiple data collection instruments (Runfola, Perna, Baraldi, & Gregori, 2016). The researcher is the primary data collection instrument in qualitative research (Fusch & Ness, 2015; Marshall & Rossman, 2015; Yin, 2017). In the current study, I was the primary data collection instrument. I used face-to-face

semistructured interviews and reviewed organizational documentation to explore

underlying themes.

Semistructured Interviews

To collect data from participants, I conducted semistructured interviews. Yazan

(2015) refers to interviews as data collection tools. Semistructured interviews are a

primary source of data used in case studies (Runfola et al., 2016). Fusch and Ness (2015)

suggested that researchers should structure semistructured interview questions in a

manner that allows for asking each participant the same question. Yin (2017) advised that

when conducting interviews, using an interview protocol is effective. To guide the

interview process, I followed the interview protocol and asked the interview questions

(included as Appendix) of each participant in the same order. Facilitating the interview

and asking the same seven open-ended questions of each participant provided valuable

information regarding strategies managers use to improve employees' lack of acceptance

of technological change.

Interview sessions took place for approximately one-hour at a predetermined,

mutually agreeable time and location with each participant. During each interview, two

digital devices were in plain view of each participant and on to record the interview

session. Using these recordings, I ensured the accuracy of the data collected and

transcribed. Transcripts were edited and this process continued until data saturation was

reached. Member checking follow-up interviews allowed for the review and

interpretation of the interview transcripts and ensured data saturation was met (Marshall

& Rossman, 2016). After the initial interview, member checking follow-up interviews

were conducted. Data saturation is essential in qualitative research and occurs when no new data, coding, or themes arise and the replication of the study is possible (Elo et al., 2014; Fusch & Ness, 2015; Morse, 2015a). To enhance reliability and validity, I notated information gathered in each interview in a journal, asked probing questions, scheduled follow-up interview, and performed member checking.

Documentation Review

In addition to performing semistructured interviews, I reviewed organizational documentation and ask participants to share documentation relevant to their efforts to improve employees' lack of acceptance of technological change. Stake (1995) and Yazan (2015) recommend researchers include document review as a data collection instrument in qualitative research. Although interviews are the primary source of data, Koch, Niesz & McCarthy (2014) and Yin (2017) recommend analyzing multiple sources, including secondary sources such as documents to improve the credibility of the study findings. Analyzing documents for data such as themes or patterns allowed me to gather information relevant to the strategies managers use to improve employees' lack of acceptance of technological change (O'Brien, Harris, Beckman, Reed, & Cook, 2014; Yazan, 2015).

Member Checking

Member checking was performed to ensure the enhancement of reliability and validity of the data collection instrument and process. Reliability and validity of the data transpired by performing transcript summary review and member checking (Morse, 2015b; Yin, 2017). Following the interview, I engaged participants in transcript summary

review and member checking by e-mailing a copy of their interview transcript summary

to them. Participants responded in writing via e-mail to validate the information

contained in the summary or to provide corrections. The collection of in-depth data

occurs using member checking (Fusch & Ness, 2015); member checking follow-up

interviews can help reach data saturation (Marshall & Rossman, 2016; Yin, 2017).

Data Collection Technique

The data collection technique I used was performing semistructured interviews,

reviewing organizational documentation, and reviewing documents participants shared

that relates to their ability to improve employees' lack of acceptance of technological

change. To confirm the accuracy of the data collected, I used audio recording,

transcription, and member checking. According to Bengtsson (2016), recordings of

interviews with audio or video devices often occur with a subsequent transcription into a

written form. Audio recordings of interviews enable the researcher to develop transcripts

containing details of each interview (Rosenbaum, More, & Steane, 2016). Coding of the

data then occurs to create themes for comparison and analysis to determine the inter-

relationships that exist among them (Houghton, Murphy, Shaw, & Casey, 2015).

Interviews, observations, and documentation analysis are the primary data collection

techniques used in a single case study (Yazan, 2015).

Semistructured Interviews

After reviewing details of the study with management of organization and

receiving a Letter of Cooperation, I received a list of eligible employees that met the

study participation criteria from an employee of the organization. I contacted employees

via telephone and e-mail and provided the Invite Letter and Informed Consent Form via

e-mail. Willing participants agreed to voluntarily participate in the study and replied to

the e-mail with consent to participate.

Data were collected by conducting open-ended, semistructured, in-depth

interviews using the interview questions contained in Appendix. Semistructured, open-

ended interview questions ensure maximum engagement with participants throughout the

interview process (Rosenbaum et al., 2016). Participants received invitations to

participate in person and via e-mail. Participants also received an electronic copy of the

Invite Letter and Informed Consent Form prior to the interview and received a hard copy

of the same documents prior to the in person interview.

Interviews took place in a mutually agreeable location most natural and

comfortable for the participant on a mutually agreeable date and time. One interview was

conducted in a conference room at the organization, one interview was conducted over

the phone, and three interviews were conducted at local coffee houses. Interviewing

participants in a natural setting helps reveal pertinent information in the interview process

(Morgan, Pullon, Macdonald, McKinlay, & Gray, 2017). During telephone discussions

and in person, I reminded participants their participation was voluntary and their

identification, identification of the organization, and responses were confidential.

The use of semistructured interviews has advantages and disadvantages. A

primary advantage is semistructured interviews are a primary data collection technique

used in a single case study (Runfola et al., 2016; Yazan, 2015). An advantage of using

semistructured interviews is that facilitating interviews and asking the same seven open-

ended questions of each participant via an interview protocol provides a collection of valuable information regarding the primary research question (Yin, 2017). A similar advantage is that researchers can structure semistructured interview questions in a manner that allows for asking each participant the same question (Fusch & Ness, 2015). A disadvantage is that researchers can miss the opportunity to maximize engagement with participants if interviews are not conducted appropriately (Rosenbaum et al., 2016). Another disadvantage can be the inability to collect valuable information regarding the primary research question with poorly structured interview questions (Yin, 2017).

Documentation Review

I collected nonconfidential organizational documentation participants were willing to share relevant to their efforts to improve employees' lack of acceptance of technological change. Participants shared via e-mail nonconfidential project documents, project notes, training reference guides, and internal communications regarding technological change projects. By reviewing organizational documentation and documentation shared by participants, the credibility of the study findings improved (Koch et al., 2014; Yin, 2017). Collecting documentation and conducting an analysis of the documents for data such as themes or patterns enables the gathering of information relevant to the strategies managers used to improve employees' lack of acceptance of technological change (O'Brien et al., 2014; Yazan, 2015). I analyzed all documentation collected, used Yin's 5 phases of data analysis, and used software to manage the data and identify themes.

The use of documentation review has advantages and disadvantages. A primary advantage of using documentation review is data analysis occurs from a collection of data from a primary data collection technique used in a single case study (Yazan, 2015). Another advantage of documentation review is an improvement of the credibility of the study findings (Koch et al., 2014; Yin, 2017). A disadvantage of documentation review is improper analysis and theme identification can negatively influence the credibility of the study (Koch et al., 2014; Yin, 2017). Failure to collect data such as themes or patterns can negatively influence the amount of information available that is relevant to the strategies managers use to improve employees' lack of acceptance of technological change (O'Brien et al., 2014; Yazan, 2015).

Member Checking

Member checking occurred to ensure reliability and validity of data contained within the study (Yin, 2017; Morse, 2015b). Member checking followed each interview and a copy of the paraphrased interview was e-mailed to each participant to confirm the information was accurate. Although a specific response time was not provided to participants, all participants responded in writing via e-mail within 2-3 business days to validate the information contained in the summary or to provide corrections.

During the member checking process, one participant contacted me to discuss the interview summary and one participant requested to make one minor change to the interview summary. Using member checking allows for the collection of in-depth data from each participant (Fusch & Ness, 2015). Data saturation can occur by using member checking follow-up interviews (Marshall & Rossman, 2016; Yin, 2017). I used member

checking follow-up interviews to collect in-depth data from participants and to reach data saturation. I conducted three interviews for one participant, two interviews for another participant, and one interview for three participants.

The use of member checking has advantages and disadvantages. The advantage of member checking follow-up interviews is the researcher has an opportunity to review and interpret the interview transcripts to ensure data saturation is met (Marshall & Rossman, 2016). Another advantage of member checking is the confirmation of reliability and validity if performed correctly (Morse, 2015b; Yin, 2017). Reliability and validity of the data will not occur if member checking is not performed correctly creating a disadvantage (Morse, 2015b; Yin, 2017). When member checking occurs via telephone interviews, the researcher misses out on nonobservable body language and mannerisms that can provide additional data, creating a disadvantage for the researcher (Mapesa, 2016). During each interview, I noted changes of body posture, tone of voice, and facial expressions. For the phone interview, I was only able to note tone of voice.

Data Organization Technique

In qualitative research, researchers systematically and properly managing and organizing data is important. Data collection instruments included myself as the primary data collection instrument, semistructured interviews, handwritten notes collected during the interview process, audio recordings of each interview captured via a cell phone and Olympus audio recorder, paraphrased transcriptions of each interview, and nonconfidential project documents, project notes, training reference guides, and internal communications regarding technological change projects provided by participants.

I used NVivo 12 software to manage, store and manipulate data collected during the research process. NVivo 12 software enabled me to run queries, test emerging themes, and create text files to transcribe audio and written notes (Woods, Paulus, Atkins, & Macklin, 2016). I transferred data collected via note taking during each interview to Microsoft Word and analyzed the Word documents plus documents provided by participants in Microsoft Excel or Adobe pdf formats in NVivo 12. Cataloging data by theme and description allows for the maintenance of consistency and ensures reliability (Bengtsson, 2016). I cataloged the data by theme and description to maintain consistency and ensure reliability.

Security of data in electronic and hard copies formats is of utmost importance. I transferred all hard copy documents into an electronic format using Microsoft Word, Microsoft Excel, or Adobe. Once the transferring of hard copy documents into an electronic format was complete, I shredded all hard copies. Electronic documents were password protected and stored on an encrypted external hard drive. By university policy, the destruction of all data will occur after 5 years. I will shred the hard drive to ensure the proper destruction of all protected data.

Data Analysis

The primary purpose the of data analysis process is to organize, analyze, and identify themes to enable the researcher to interpret the results and seek answers to the research question (Bengtsson, 2016). Yazan (2015) recommended using a case study database to assist the researcher with managing data collected. Yin (2017) also discussed the need to establish a case study database to organize data collected throughout the

research process. I used methodological triangulation to analyze data collected from face-to-face interviews, performed member checking to validate recorded and paraphrased data, analyzed additional documentation collected such as nonconfidential project documents, project notes, training reference guides, and internal communications regarding technological change projects, used Yin's 5 phases of data analysis, and used NVivo 12 software to manage data and identify themes. The conceptual framework, TAM, informs the research question and data analysis by addressing strategies some managers use to improve employees' lack of acceptance of technological change.

Yin's 5 Step Data Analysis

Compiling. I compiled all data collected during the interviews process, from documentation provided by participants, and from organizational documentation. I analyzed all responses received and transcribed each participant's response onto a separate Microsoft Word document. Assigning unique identifiers such as P1, P2, etc. to replace participant names allows for the maintenance of participant confidentiality (Becnel et al., 2016; Erlich & Narayanan, 2014; Ostergren et al., 2015). I assigned unique identifiers to replace participant names to maintain participant confidentiality. I thoroughly reviewed and analyzed data to ensure rick, thick data were collected and organized data into themes. After data compilation was complete, disassembling occurred.

Disassembling. Disassembling the data using keywords identified during the data collection and data analysis processes allows for the derivation of common themes, concepts, terms, and phrases (Dasgupta, 2015; Hyett et al., 2014; Yin, 2017). After

compilation, I disassembled the data. I analyzed the audio recording of each interview along with transcribed notes and journal notes to identify additional themes, concepts, terms, and phrases. I added additional codes and themes identified in the data analysis process to the current list of themes. After disassembling the data, I proceeded to reassembling the data.

Reassembling. After disassembling the data, I reassembled the data and categorized the data into broader themes. Reassembling the data into broader themes or patterns allowed me to gather information relevant to the strategies managers use to improve employees' lack of acceptance of technological change (O'Brien et al., 2014; Yazan, 2015; Yin, 2017). I used NVivo 12 software to aid in the organization of data to eliminate redundancies and to query, sort, and arrange of the data into specific themes.

Interpreting. After reassembling the data to identify patterns and themes, I proceeded with data interpretation. Thematic analysis allows for the interpretation of participant experiences related to the research question and will ensure data saturation is met (Dasgupta, 2015; Marshall & Rossman, 2016; Percy, Koster, & Kostere, 2015). I interpreted the data to gain an understanding of strategies managers use to improve employees' lack of acceptance of technological change. After interpreting the data, I concluded data analysis.

Concluding. After interpreting the data, I summarized all data collected to form a conclusion. The confirmation of findings occurs by eliminating personal bias and ensuring all conclusions, interpretations, and findings are results of the data analysis and member checking process (Cope, 2014). Data saturation occurs by ensuring no new data,

coding, or themes arise and the replication of the study is possible (Elo et al., 2014; Fusch & Ness, 2015; Morse, 2015a). I confirmed findings by eliminating bias and achieved data saturation by ensuring no new data arose.

Triangulation

To ensure data were accurate, credible and saturation occurred, I used methodological triangulation. According to Fusch and Ness (2015), researchers achieve data saturation by performing data triangulation. Methodological triangulation, best used when considering data from multiple data collection methods, enables researchers to ensure the reduction of data uncertainty after confirmation of multiple measurement processes (Baskerville et al., 2015; Fusch & Ness, 2015, Morse, 2015a).

Methodological triangulation materialized through face-to-face interviews and documentation analysis to ensure data saturation occurred. Documentation analyzed consisted of nonconfidential project documents, project notes, training reference guides, and internal communications regarding technological change projects. Triangulation improves the probability of the research findings through different means, implies the same information exists among multiple or single sources of data, and the best use is when considering people, time, and space (Baskerville, Kaul, & Storey, 2015; Fusch & Ness, 2015; Guba, 1985). According to Morse (2015a), diverse participants promote methodological triangulation. I ensured a diverse participant pool meeting the established eligibility criteria were selected to participate in the current study.

Software and Theme Identification

I began data analysis by importing the data I collected into NVivo 12. I then created an initial list of codes using keywords contained in the research question to manage the amount of data collected as also recommended by Houghton et al. (2015). As suggested by Bengtsson (2016), I maintained a list of codes and a description of each to maintain consistency throughout the data analysis process and to ensure reliability.

I performed a thematic analysis to interpret participant experiences of motivating employees to embrace technological change. I focused on correlating identified themes with literature and the conceptual framework. The results of research conducted by Woods et al. (2016) were that researchers used NVivo 12 for data collection, analysis, and presentation of findings with 99.6% of the use for data analysis. I used the functionality available in the NVivo 12 software to create text files to transcribe audio and written notes as suggested by Woods et al. (2016). I also explored options available in the NVivo 12 software to code audio files, eliminating the need to transcribe data, reducing errors, and increasing reliability and validity.

According to Zamawe (2015), NVivo 12 makes data analysis and retrieval easier, because it allows researchers to code data is an easy, efficient, and effective manner. Zamawe (2015) concluded that the use of NVivo 12 is an important component of qualitative research as it improves accuracy of data and saves time by eliminating the need for the researcher to transcribe data. I addressed reliability and validity by identifying recurrent themes and by performing member checking with participants.

Reliability and Validity

Reliability

To measure the quality of the research design, researchers must consider

reliability (Yazan, 2015). Reliability and dependability often receive the same meaning

and ensure repetition of the same application of the same instrument will yield similar

results (Baskerville et al., 2015; Lincoln & Guba, 1985). The objective of reliability is to

ensure that another researcher can reach the same outcomes following the same

procedures to conduct the same study (Bengtsson, 2016; Yin, 2017). I ensured the

dependability of the findings by ensuring I reached data saturation. I also enhanced the

dependability of the study by performing member checking and transcript review. By

using the interview protocol (located in Appendix), I ensured reliability exists within the

current study.

Validity

Validity is important in research and is a test researcher use to establish the

quality of the research (Yin, 2017). Validity occurs when the data presented in the study

accurately and truthfully reflects the phenomenon of the study (Bengtsson, 2016).

Researchers can ensure validity by ensuring thick descriptions are used and by

performing member checking and triangulation (Yazan, 2015). Credibility,

transferability, and confirmability establish validity in a qualitative study. I achieved

credibility, confirmability, and transferability by achieving data saturation.

Credibility. Achievement of credibility developed by performing member

checking of the data interpretation, performing a participant transcript review,

triangulation, and following the interview protocol (located in Appendix). Using member

checking, I ensured credibility and validity of the research by obtaining participant

approval and verification of data collected as recommended by Smith & McGannon

(2017). As member checking requires participants to validate the accuracy and

truthfulness of data from their perspective, the use of member checking allows

researchers to control bias and enhance credibility (Smith & McGannon, 2017). As

recommended by Bengtsson (2016), I adhered to the standard identified in the interview

protocol (contained in Appendix) to maintain rigor and credibility throughout the study to

ensure that the results are as trustworthy and credible as possible. By performing

transcript review and member checking, the results will accurately reflect the

perspectives of the participants and will ensure reliability and validity exists (Yin, 2017;

Morse, 2015b). Triangulation is an activity I will perform to increase the credibility of the

research findings (Baskerville et al., 2015; Fusch & Ness, 2015; Lincoln & Guba, 1985).

Confirmability. To achieve confirmability, I remained objective. I ensured that

findings of the study aligned with participant experiences and responses. Exclusion of

personal bias, interests, desires, or motivations is necessary (Baskerville et al., 2015;

Lincoln & Guba, 1985). Following each interview, I performed member checking with

each participant either in person or by allowing participants to provide confirmation via

e-mail, whichever was most convenient for the participant and mutually agreed upon with

the participant and I. Confirmability occurs by demonstrating all conclusions,

interpretations, and findings of the data came from the data and not from my personal

opinion or bias (Cope, 2014). Enhancement of confirmability will occur by ensuring that

participants confirm and support the results and richness of data (Elo et al., 2014). Participants were probed during interviews as necessary to ensure the collection of thick, rich data. I also performed triangulation to enhance the confirmability.

Transferability. Transferability will occur if the characteristics of the findings in this research can be applicable in other research (Baskerville et al., 2015; Cope, 2014; Lincoln & Guba, 1985; Yilmaz, 2013). According to Cope (2014), my responsibility to demonstrate transferability was to present study results in a manner that others not involved with the study can relate to with their own experiences. Although each reader will determine the level of transferability of the study and information contained within it, I was responsible to provide a thick description of the data contained in the study and the data collection process (Houghton et al., 2015; Yilmaz, 2013). I provided thick descriptions of the participants, demographics, sources of evidence, and boundaries of the study to ensure others can determine transferability. I documented all steps taken and maintained an audit trail to demonstrate adherence to the data collection and analysis techniques for the case study. I used the interview protocol (located in Appendix) and followed the six steps contained within it.

Data saturation. The achievement of credibility, confirmability, and transferability ensured I achieved data saturation. As suggested by Marshall & Rossman (2016) and Yin (2017), I performed member checking and conducted follow-up interviews to ensure I achieved data saturation. An essential component of qualitative research, data saturation occurs when no new data, coding, or themes arise and the replication of the study is possible (Elo et al., 2014; Fusch & Ness, 2015; Morse, 2015a).

To achieve data saturation, I also performed data triangulation as recommended by Fusch and Ness (2015). I inquired with participants and continuously interviewed to ensure I obtain information with minimal to no variations. Redundancy in data indicates data saturation exists.

Transition and Summary

Section 2 included the focus on the problem statement, purpose statement, research question, interview questions, conceptual framework, and the literature review. Section 2 also included discussions of the role of the researcher, participants, research method, research design, population and sampling and ethical research. Section 2 concluded with a discussion of data collection instruments and techniques, data organization technique, data analysis, reliability, validity, credibility, confirmability, and transferability.

Section 3 included a focus on the application to professional practice and implications for change. Beginning with an introduction, I reiterated the purpose of the study and provided a presentation of the findings. Section 3 included discussions of the applications to professional practice, implications for social change, recommendations for action, and recommendations for further research. I reflected on my experience in the DBA Doctoral Study process followed by a formal conclusion.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative single case study was to explore strategies some midlevel managers used to improve employees' lack of acceptance of technological change. I used purposive sampling to select five participants from the local government organization. Data were collected from in-person interviews and organizational documentation related to the research topic, such as nonconfidential project documents, project notes, training reference guides, and internal communications regarding technological change projects. Four themes emerged as a result of the interviews and documentation review. The findings showed strategies managers used to improve employees' lack of acceptance of technological change.

Presentation of the Findings

The overarching research question for this study was the following: What strategies do some midlevel managers use to improve employees' lack of acceptance of technological change? The interviews were conducted in-person with each participant. The length of each interview ranged from 45 to 60 minutes. Each interview was recorded with an audio recording device and was reviewed multiple times throughout the transcription process. Documentation related to the research question was also reviewed. Data saturation was achieved, and no new information was received after the third interview.

During the member-checking process, each participant was provided a summary of the interview via e-mail, which contained the question and each corresponding

summarized response. Each participant had the opportunity to review and validate the summary of the interview for accuracy and provide feedback regarding my interpretation. If a participant questioned the interpretation of the interview summary, I provided a copy of the transcript and allowed the participant to review it for accuracy. Once confirmation of accuracy of the transcript was received from each participant, I loaded the interview transcriptions and other documentation received related to the primary research topic into NVivo 12. The NVivo 12 software was used to analyze the research data and from that data analysis, I derived four themes: (a) training, (b) communication, (c) involvement, and (d) management support.

Theme 1: Training

The most prevalent theme that emerged from participants responses was that training was an important component to the strategy midlevel managers used to improve employees' lack of acceptance of technological change. As depicted in Figure 1, all participant responses and all documentation reviewed highlighted the need of training during technological change.
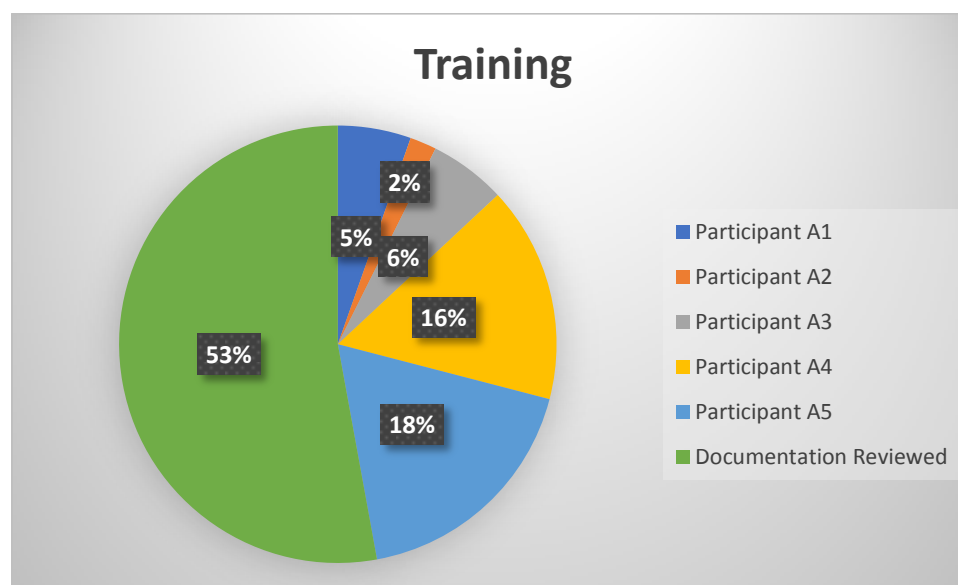
Figure 1. Frequency of training.

Documents reviewed contained a significant amount of training material, user guides containing graphical step-by-step instructions, and e-mails providing additional information regarding the related technological change. The training theme appeared in 53% of the organizational documents reviewed. Thirteen percent of the training responses were from Participants A1, A2, and A3. Sixteen percent of the training responses were from Participant A4. The remaining 18% of the training responses were from Participant A5. Participant A1 emphasized the need to "provide training classes to give them an opportunity to interact with new software or technological change as much as they want and not be afraid of impacting production." Similarly, Participant A2 stated, "We did hands-on training, which they all got a lot of chance to play" with the new technology. Participant A3 emphasized the need to make "sure they were equipped with training, so they could feel comfortable and embrace" the technological change. According to Participant A4, the strategy is simple: "Give the people time to learn on the clock, help

them, assign personnel to help those in need, and give them access to computers."

Participant A5 stated that during technology changes, some employees are simply

"relying on someone else to just show them how to do something."

Training as a strategy to improve employees' lack of acceptance of technological

change aligns with the conceptual framework, TAM. PU and PEOU are the primary

technology-related determinants of TAM to predict an individual's behavioral intention

(Bhatti, 2015; Muk & Chung, 2015). An individual's PEOU is a motivator of his or her

attitude and willingness to use technology (Hashim et al., 2015), and PEOU has a direct

causal effect on PU (Kaushik & Rahman, 2015). Because most users would find the

system that is easier to use more useful (Kaushik & Rahman, 2015), providing ample

training during a technological change process is important.

Training as a strategy was also reported in other studies. In a study focusing on

self-service technology readiness, Ramaseshan, Kingshott, and Stein (2015) shared that

employees learn how to use new technology more effectively when involved in the

technological change process. Beyond learning the new technology, employees'

experiences and willingness to accept the technology will flow throughout the

organization. In a study of e-payment adoption in Ghana, Acheampong et al. (2017)

reported that individuals lack acceptance of technology viewed as difficult to operate and

training would be beneficial and lead to acceptance. When studying the use of new virtual

learning environments, Rienties, Giesbers, Lygo-Baker, Ma, and Rees (2016) argued that

teachers may not have received the training needed and that more formal training and

support were needed.

Theme 2: Communication

        Communication was a theme that emerged from participants' responses and was an important component to the strategy midlevel managers used to improve employees' lack of acceptance of technological change. Figure 2 shows the number of responses each participant provided that involved communication.
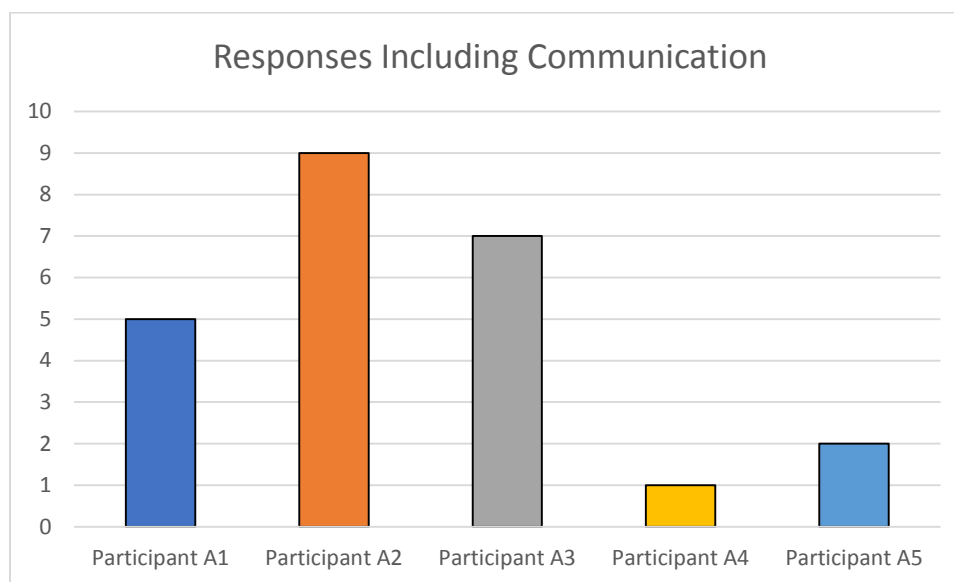
Figure 2. Responses to Theme 2.

        Communication as a strategy to improve employees' lack of acceptance of technological change aligns with the conceptual framework, TAM. As communication occurs, employees gain a better understanding of the technological change and are more receptive to it. According to Ekdale et al. (2015), employees were more willing to accept new technology when he or she believed the technology would increase the quality of their work and were more resistant when technological change was perceived as damaging, disruptive, or poorly communicated. Pourrajab et al. (2015) argued that lack of

communication is one of five basic resistances to change, resulting in a lack of

acceptance of technological change. Participant A1 stated,

> The method that worked best was to allow the employees to give input into the
>
> technological change. If they felt like they could give you suggestions, then you
>
> got more buy-in, which allowed them to be more accepting of change.

Similarly, Participant A2 shared, "I think the more information you share as a leader,

either with a project or a department, helps you gain trust and buy-in from your people."

Participant A3 stated,

> Communicating with them is basically what it is. I think even when you know
>
> that you have to accept a change, no matter what the change is, if you are given
>
> the respect of being informed that this is what's occurring, and asked what do you
>
> think, or getting some input from them, there is a greater possibility of successful
>
> transition.

Participant A4 was direct when stating, "To improve functionality, improve

communication." Participant A5 suggested communicating technological change in the

form of a sales pitch to convince employees that the change is in the best interest of the

employee and the organization.

Communication as a strategy is also reported in other studies. When addressing

self-service technology readiness within firms, Ramaseshan et al. (2015) reported that

technology adoption occurs in organizations with cultures that encourage increased

communication, and that direct, simultaneous communication results in the

accomplishment of organizational goals. When considering the impact of using a virtual

employee engagement platform, Kim and Gatling (2018) argued that technology can be a powerful tool to boost communication and employee engagement within an organization. Increased communication during a technological change process enables employees to gain a better understanding of the technology, which may impact their PEOU and PU of the new technology. Communication skills are an attribute of career and leadership success (El Ouirdi, El Ouirdi, Segers, & Pais, 2016), which may have affected employee acceptance of technological change.

Theme 3: Involvement

Involvement was a theme derived from the interviews and documentation review as an important component to the strategy midlevel managers used to improve employees' lack of acceptance of technological change. As depicted in Figure 3, all participant responses highlighted the need of involvement during technological change.
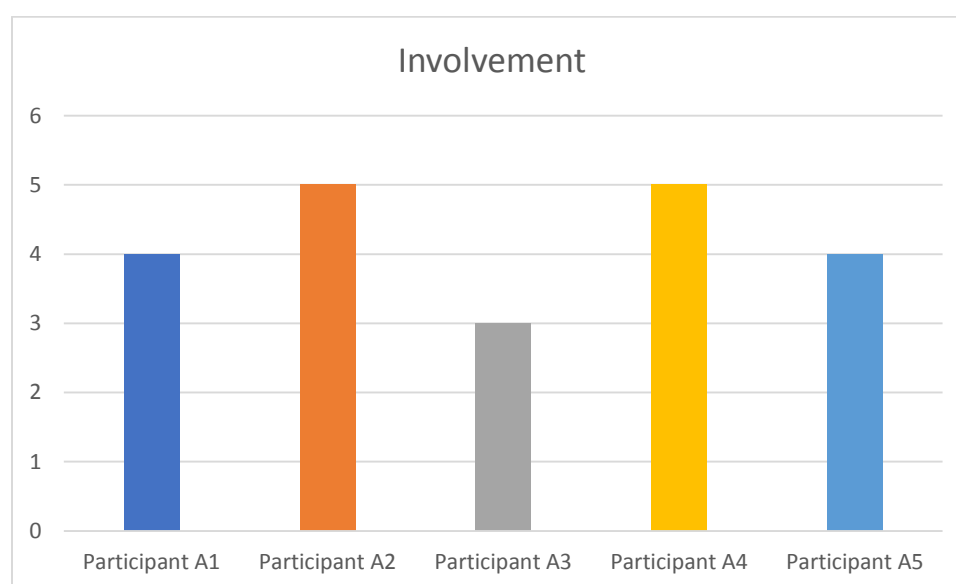
Figure 3. Responses to Theme 3.

Involvement as a strategy to improve employees' lack of acceptance of technological change aligns with the conceptual framework, TAM. Treem (2015) reported that perceptions of the usefulness of technology can come from conversations with coworkers and previous personal experiences with similar technologies. Ali et al. (2016) agreed that user involvement during technological change can minimize user resistance. Employees also resist change when the intent of the proposed change is not fully understood (Sofat et al., 2015). Involving employees in technological change may positively influence their perception of the usefulness of the technology and reduce their lack of acceptance of the technological change.

Participant A3 shared, "That feeling of something occurring that affects you, but the decision is made without your involvement, or being told you are going to have to accept a change no matter what, often leads to resistance." To remedy this, Participant A2 suggested, "As technological change is coming…get more people involved early on,…talk about your needs, talk about how you need this technology to perform for you." Participant A1 suggested,

> Start your project with meetings with each department, or group, or individual
> who will be affected by the change and give them an opportunity to say well this
> is what I think the system should do …, that seems to go a long way to them
> accepting the change more often.

Involvement as a strategy was also reported in other studies. Employees involved in technological change from development through implementation learn how to use the technology effectively and can act as catalysts or barriers to acceptance of new

technology throughout the organization (Ramaseshan et al., 2015). Employee involvement in technological change allows employees to contribute to the process allowing for more innovation and an increased understanding of the technology. Acheampong et al. (2017) argued that optimism, innovativeness, and convenience positively affect acceptance of technology, but discomfort and insecurity contribute to resistance. When addressing technology acceptance drivers, Rauschnabel and Ro (2016) argued that acceptance improves when a clear understanding exists of who early adopters and innovators are. Nguyen et al. (2015) also expressed that innovation, employee attitudes, knowledge, and skills also impact acceptance of technological change.

Theme 4: Management Support

The final theme derived from the interviews and documentation review was management support was an important component to the strategy midlevel managers used to improve employees' lack of acceptance of technological change. As depicted in Figure 4, all participant responses highlighted the need of management support during technological change.
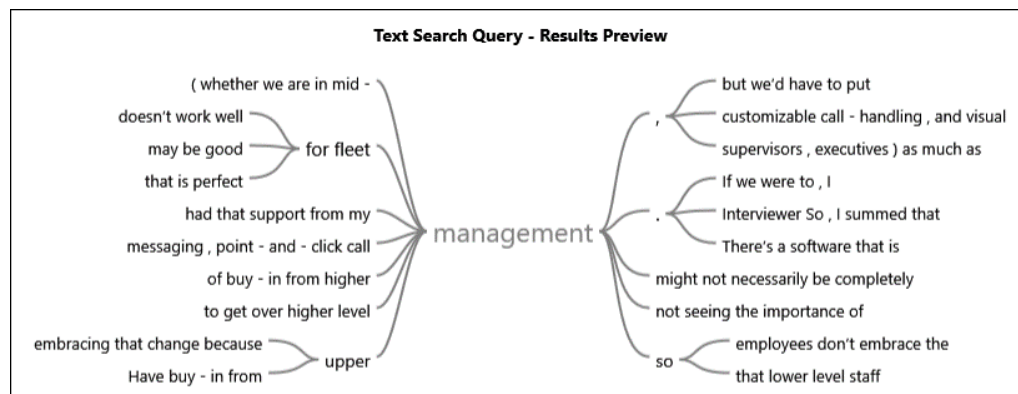

Figure 4. Word tree for Theme 4.

Management support as a strategy to improve employees' lack of acceptance of technological change aligns with the conceptual framework, TAM. As identified in TAM, PEOU and PU are fundamental determinants of acceptance of technological change. Lack of management support, lack of budget, difficulty in coordinating project-related efforts, and the amount of time spent on the change effort are organizational factors that contribute to lack of acceptance of technological change (Mo & He, 2015). Ali et al. (2016) agreed that lack of action from leadership also contributes to resistance. Although resistance is a naturally occurring phenomenon (Latta, 2015), inappropriate or poor management style is a causative factor of lack of acceptance (Muo, 2014). Because people are more likely persuaded to accept change when advocated by people considered powerful, trustworthy, attractive, an expert or of the same social group as themselves (Jost, 2015), management must understand the close relationship between employee's resistance to change, and the effect it has on their behavioral intention, which will impact their willingness to use the newly proposed technology (Huang, 2015).

Participant A4 stated, "If we had buy-in from our managers, that manage me, and I could give that to my guys, then they'd have something easy…support from my management." The same participant stated support "from the top above me … make it easier for us to input, and implement, and use the program." Participant A3 shared, "There have been times when employees did not embrace, because we didn't have complete buy-in from individuals who may have been higher up, so the employees didn't feel the need to embrace it either." The same participant stated, "They are not embracing

that change, because upper management might not necessarily be completely onboard – it trickles down."

Management support as a strategy is also reported in other studies. When addressing technology acceptance in social media, Wirtz and Göttel (2016) shared that the organization benefit of the technological change was better understood when the communication came from and the change was supported by management. For this reason, Ramaseshan et al. (2015) emphasized the need of technological innovation being viewed as a management process within an organization and not a functional activity. Nguyen et al. (2015) identified lack of management support as a barrier to technological change adoption and encourage communication, training and contribution to occur throughout the organization.

Applications to Professional Practice

Technology is a component of most business operations and changes rapidly (Darr, 2016). Technological enhancements and innovations influence how and when communication occurs within and outside of an organization with employees, management, and stakeholders alike allowing connectivity to occur any time and everywhere online (Rauschnabel & Ro, 2016). Employee lack of acceptance of technological change is a common reason technology implementation fails, often resulting in a loss of resources, decreased productivity, and reduced organizational profitability (Hwang et al., 2016; Khatoon & Farooq, 2015). To minimize the risk of losing money, resources, and profitability, managers should understand the significance employee resistance to technological change has on an organization's bottom line. To

improve employees' lack of acceptance of technological change, the five study

participants identified the following as strategies used: (a) training, (b) communication,

(c) involvement, and (d) management support.

Each of the strategies or findings identified are applicable to the professional

practice of the local government organization under study and any other organization

considering technological change. Providing training ensures that end users understand

how to best use new technologies. Trained users are more comfortable using the new

technology, use it more effectively, and perceive the new technology as useful and easy

to use and are more accepting of it. Communication allows for sharing of critical

information from the exploration to implementation process to ensure the technology

meets the needs of the end users. Involvement allows employees to be engaged and a part

of the technological change process, thereby resulting in increased employee acceptance

of the technological change. Management support may also improve business practice as

end users are more receptive of technological change when employees' receive support

from management and management supports the change.

Implications for Social Change

The results of the current study may assist organizational leaders in improving

lack of employee acceptance of technological change through a better understanding of

strategies that emerged from the findings and have been successfully used. By

contributing to the body of knowledge regarding technological change, I hope my study

assists organizational leaders with being better prepared to successfully implement

technological changes of any type. Understanding organizational change and the effect it

has on employees is important for social change to occur (Harper & Leicht, 2016). The

identification of training, communication, involvement, and management support as

strategies used to improve employee lack of acceptance of technological change informs

leaders of fundamental items most important to one of its primary stakeholders, the

employees.

With new insights into the strategies used to improve employees' lack of

acceptance of technological changes, findings may be used to increase organizational and

resource allocation efficiencies to improve services to residents, local businesses,

employees, and other stakeholders by promoting development of and services available to

the community. The results of the current study may provide management of the

organization with information that allows an opportunity for efficiencies to be

implemented thereby freeing up resources to benefit the community. Positive social

change can occur by streamlining processes, saving time and money, and implementing

technologies that enable the local government organization to provide information to,

communicate with, and provide enhanced continual service to the members of its

community. This social change would result in improved human and social conditions for

residents, expanding available services, and better use of resources to benefit

stakeholders in the local community.

Recommendations for Action

The recommendations for action are derived from my research and from the

academic literature that was reviewed. The recommendations are for managers of the

local government organization or any organization considering technological change.

Based on the themes of (a) training, (b) communication, (c) involvement, and (d) management support derived from my research, I recommend the following:

1. Training should be provided throughout the technological change process. Training is crucial to end user perception of ease of use, perception of usefulness, and acceptance.

2. Allow adequate time and resources for staff to learn how to use the new technology.

3. Encourage innovation to encourage technology to be built to meet immediate and future needs. Encourage staff to think outside of the box.

4. Communicate organizational and technological changes with staff before, during, and after the change process.

5. Encourage cross communication throughout the organization and encourage staff to share ideas and provide input.

6. Involve staff from all levels of the organization in the technological change process from exploration to implementation.

7. Management should communicate support of technological change and innovation to staff. This can be communicated via memos, e-mail, training sessions, and face-to-face verbal interactions.

Recommendations for Further Research

The purpose of this qualitative single case study was to explore strategies some midlevel managers use to improve employees' lack of acceptance of technological

change. The findings of the current study provide support for additional research to be conducted. Two limitations that were identified and are worth further exploration.

The geographic location and sample size of the current study pose a limitation. Five midlevel managers of a local government organization located within the Southwestern region of the United States was the sample used in the current study. Future researchers can address this limitation by increasing the sample size in future research and by conducting further research in a different geographic location. Further research can be conducted in organizations of any type and focus beyond local government organizations. Further research can be conducted in any type of organization undergoing technological change.

An additional limitation is two data collection methods were used: interviews and documentation. Future researchers can address this limitation by using additional data collection methods. In addition to interviews and documentation, future researchers can also consider focus groups, direct observation, journaling, and field notes as additional data collection methods.

Reflections

When embarking on this journey, I had no idea I would dedicate so much time and energy to this process. I knew the process would be challenging mentally, but I did not anticipate the emotional journey I would endure. I started this process with experience and ideas about technological change but had no thoughts or opinions about the results of this study. I focused on ensuring my personal biases did not impact the study results and following the interview protocol during each interview. I also used

NVivo 12 software to analyze the data and confirmed reliability and credibility of the findings by conducting member checking.

Obtaining the Letter of Cooperation from the organization was not challenging at all. Within 2 days of submitting my request, I received the actual letter. Similarly, I had no challenges locating willing participants. The challenge I did encounter was finding time to conduct interviews and perform member checking as I received IRB approval in November and many participants were vacationing for the Thanksgiving and Christmas holidays, which caused slight delays in this process.

During the interviews, I was amazed at how important my research topic was to each participant. Participants were engaged during the interview and passionate about the responses he or she provided. Without the participation of each participant, completing this study would not have been possible. From their interviews, themes were identified and the importance of each is better understood. This doctoral process was challenging yet rewarding. I will be proud to have earned such a prestigious degree.

Conclusion

The purpose of this qualitative single case study was to explore strategies some midlevel managers use to improve employees' lack of acceptance of technological change. Data were collected from 5 participants from a local government organization in the Southwestern region of the United States and documentation was reviewed. Member checking was performed, data saturation was met, and data were analyzed using NVivo 12 software. Four themes emerged as a result of the interviews and documentation review: (a) training, (b) communication, (c) involvement, and (d) management support.

The findings of this study provide support for additional research to be conducted and positive social change. Future researchers can expand the population, geographic location, and incorporate additional data collection methods. Positive social change can occur resulting in improved human and social conditions for residents, expanding available services, and better use of resources to benefit stakeholders in the local community.

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Appendix: Interview Protocol

Interview Protocol

What you will do	What you will say—script
Introduce the interview and set the stage—often over a meal or coffee	Hello, my name is Monique Edwards, the researcher conducting this study. Thank you for consenting to participate in this study to explore strategies managers use to improve employees' lack of acceptance of technological change. During the interview, you will be asked the following eight questions and possibly follow-up or clarifying questions. The interview is scheduled for 1-hour and I will respect your time and stay within the 1-hour timeframe. Following the interview, I will transcribe the interview and seek validation of accuracy from you. Feel free to ask me to clarify any questions asked if need. Do you have any questions before you begin?
- Watch for nonverbal queues - Paraphrase as needed - Ask follow-up probing questions to become more in-depth	1. What have been the main reasons or motivations for technological changes within the organization? 2. What strategies did you use to improve employees' lack of acceptance of technological changes within the organization? 3. What motivational method worked best to encourage employees during the technological change process? 4. How did employees respond to each method or technique used? 5. What strategies do you recommend managers use when attempting to improve employees' lack of acceptance of technological change? 6. What strategies or steps do you recommend managers within the organization use when introducing and implementing technological

	change?
	7. What challenges or barriers did you have to overcome to improve employees' lack of acceptance of technological change?
	8. What other additional information would you like to add regarding strategies used to improve employees' lack of acceptance of technological change within the organization?
Wrap up interview thanking participant	Thank you so much for taking the time to meet with me and for participating in this study. I will reach out to you soon to seek your validation of the accuracy of my transcription of the interview and to ask clarifying questions. The follow-up contact will occur via telephone or e-mail. I look forward to our follow-up discussion. Thank you.
Schedule follow-up member checking interview	Thank you for participating in the initial interview. I would like to schedule a follow-up member checking interview to review, validate, and clarify the information I transcribed from our interview. Are you available this week to discuss the interview?
Introduce follow-up interview and set the stage	Thank you so much for taking the time to participate in a follow-up interview. The purpose of this interview is to clarify information received in the initial interview to ensure a complete understanding. Do you have any questions before we begin?

Share a copy of the succinct synthesis for each question.

Bring in probing questions related to other information that you may have found—note the information must be related so that you are probing and adhering to the IRB approval.

Walk through each question, read the interpretation and ask:

Did I miss anything? Or, what would you like to add?

The following transcription contains a succinct synthesis for each question asked in our initial interview. We will review each question and interpretation. I will ask questions related to other information that I may have found. I will also ask if I missed anything or if you would like to add additional information. Please feel free to chime in at any time. Thank you.