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Information Communication and Technology Strategies for Improving Nonprofit Organizations' Effectiveness

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Walden University

College of Management and Technology

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Richard T. Evans

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Walden University
2022

Abstract

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Organizations' Effectiveness

by

Richard T. Evans

MSCS, Governors State University, 2012

MSMIS, Governors State University, 2006

MBA, Governors State University, 1999

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

June 2022

Abstract

Some nonprofit organization leaders lack strategies to incorporate information communication and technology (ICT) into the business operations of organizations. A nonprofit organization lacking strategies involving integrating technology into their business operations decrease the likelihood of being efficient, productive, and effective. Grounded in the information technology (IT) competency model, the purpose of this qualitative single case study was to explore the ICT strategies of a nonprofit organization leader in the south suburbs of Chicago. Data were collected semi-structured interviews, direct observations, and reviews of organizational documents. The Marshall and Rossman seven-step process was used to analyze data. Three themes emerged from data analysis: selection and implementation of software, employee training and adaptation, and improved process and productivity. A key recommendation is for leaders of a nonprofit organization to acquire and implement software that integrates with other software to meet the needs of business operations. Implications for positive social change include the potential to implement an efficient technological environment that will allow for increased services throughout the south suburbs of Chicago.

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Dedication

I would like to thank God, Almighty. God has guide through my DBA journey and continue to be a guidance in my life. I would like to thank wife, Linda A. Evans, for her continuous support. My wife encouragement and love got me through the tough time and for that I appreciate you and I love you. I would like to thank my son, Terrance R. Evans, for inspiring me and reminding me to focus on my goal. My son is a constant reminder of dedication and hard work. I am so proud of him and I love you.

I would like to dedicate my doctoral study to my deceased mother, Blanche N. Evans, (deceased) and my father, Tommie L. Evans (deceased). Without the work ethics that my parents instill within me, this accomplishment would not have been possible. I worked very hard to make them proud. I love and miss you every day.

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Table of Contents

List of Tables	v
Section 1: Foundation of the Study.....	1
Background of the Problem	1
Problem Statement	1
Purpose Statement.....	2
Nature of the Study	2
Research Question	4
Interview Questions	4
Conceptual Framework.....	5
Operational Definitions.....	5
Assumptions, Limitations, and Delimitations.....	6
Assumptions.....	6
Limitations	7
Delimitations.....	7
Significance of the Study	7
Implications for Positive Social Change.....	8
A Review of the Professional and Academic Literature.....	8
Literature Review Search.....	9
IT Competency Model	9
TAM	10

UTAUT	11
Future of Technology in the Workplace	12
General Theory of Employment, Interest, and Money	13
ICT 13	
ERP 14	
ICT Model.....	17
Technology Advancement	22
Cybersecurity	23
Nonprofit Organizations and Leadership.....	29
Operational Effectiveness	41
Management and Technology.....	48
Transition	54
Section 2: The Project.....	56
Purpose Statement.....	56
Role of the Researcher	56
Participants.....	57
Research Method and Design	58
Research Method	58
Research Design.....	59
Population and Sampling	61
Ethical Research.....	62

Data Collection Instruments	64
Data Collection Technique	66
Data Organization Technique	68
Data Analysis	69
Reliability and Validity.....	70
Reliability.....	70
Transition and Summary.....	72
Section 3: Application to Professional Practice and Implications for Change	73
Introduction.....	73
Presentation of the Findings.....	73
Theme 1: Implementation and Selection of Software.....	74
Theme 2: Employee Adaptation and Training.....	75
Theme 3: Process Improvement and Increased Productivity.....	75
Other Relevant Findings	76
Application to Professional Practice.....	77
Implications for Social Change.....	78
Recommendation for Action.....	79
Recommendations for Further Research.....	80
Reflection on the DBA Journey	80
Conclusion	81
References.....	83

Appendix A: Email Invitation to Participate in the Study	102
Appendix B: Interview Questions.....	103
Appendix C: Informed Consent Form	104
Appendix D: Observation Protocol.....	107

List of Tables

Table 1. Literature Review Source Count..... 10

Section 1: Foundation of the Study

Background of the Problem

Nonprofit organizations contribute to the American economy. Nonprofit organizations employ 12.3 million individuals, 64 million nonprofit board members and volunteers, and tens of millions of donors who support the work of nonprofits (National Council of Nonprofits, 2019). Industries and businesses evolve and change rapidly, mainly as a result of the wide diffusion of information and communication technologies (ICT) within organizations (Giotopoulos et al., 2017). ICT can be defined as new technologies which enable and facilitate a broad range of business activities related to the storage, processing, distribution, transmission, and reproduction of information (Giotopoulos et al., 2017). The study's foundation is that ICT tools and services can increase the productivity and efficiency of nonprofit organizations. Increasing technology in nonprofit organizations allows for nonprofit organizations to provide more effective services through improved work processes (Boles, 2019). Nonprofit organizational leadership lacks ICT knowledge and expertise to implement tools and services into their business operations.

Problem Statement

Many organizations seek organizational effectiveness in an era of industry disruption via innovative business models to survive in competitive industries (Manoharan & Singal, 2019). Social media and online technology account for 7.6% of nonprofit fundraising revenues (Shin, 2019, p. 18). The general business problem is that some nonprofit organizational leaders do not have the expertise to implement ICT into

operations, resulting in an inefficient business operation. The specific business problem is that nonprofit leaders lack strategies to incorporate ICT into business operations to improve nonprofit organizational efficiencies and effectiveness.

Purpose Statement

The purpose of this qualitative single case study to explore strategies used by nonprofit leaders to incorporate ICT into business operations to improve nonprofit organizational efficiencies and effectiveness. This study's target population was three organizational leaders of a nonprofit organization in Illinois who have successfully used strategies to incorporate ICT into business operations to improve organizational efficiencies and effectiveness. Results of this study may contribute to organizational efficiencies by the adoption of ICT, allowing for increased services to the community.

Nature of the Study

There are three research methodologies: qualitative, quantitative, and mixed method (Saunders et al., 2016). The qualitative methodology was used in this proposed study. Qualitative research involves a holistic and complex view of the social world (Marshall & Rossman, 2016). It is based on an interpretive approach to environments. It relies on social interaction (Saunders et al., 2016). Using the qualitative methodology allows exploration of real-world scenarios (Saunders et al., 2016). The methodology requires the researcher to be interpretive, emergent, and evolving rather than tightly prefigured (Marshall & Rossman, 2016). It is characterized by deductive approaches to the research process aimed at proving, disproving, or lending credence to existing theories. It involves measuring and testing relationships between variables in order to

reveal patterns, correlations, and casual relationships (Leavy, 2017). The quantitative methodology is not suitable for this study because it requires using an interpretive approach to interview data and not examining variable characteristics, correlations, or differences. Mixed methods research involves collecting, analyzing, and integrating both qualitative and quantitative methods in a single project (Leavy, 2017). The mixed methodology is not appropriate as addressing the study's purpose did not require using the quantitative method.

There are four major qualitative research designs: narrative, phenomenology, ethnography, and case study (Marshall & Rossman, 2016). I used a single case study design. A case study design is primarily a social science research methodology used to investigate a phenomenon in depth in its real-world context (Yin, 2018). The case study design is the chosen design because it reflects real-world contexts (Yin, 2018). A case study is appropriate because it allows the researcher to focus in-depth on a case and retain holistic and real-world perspectives (Yin, 2018). A single case study can be used to identify and explore unique circumstances and conditions of a situation of particular interest (Yin, 2018). As a researcher, there is an opportunity to uncover a prevalent phenomenon that was previously inaccessible, and such conditions justify the use of a single case study (Yin, 2018). By contrast, phenomenology researchers focus on the meaning of individuals' personal lived experiences. The phenomenological approach involves exploring, describing, and analyzing meanings of individual lived experience (Marshall & Rossman, 2016). The phenomenological research design was not appropriate for this study because its focus is on a business case, not personal meanings of

participants' lived experiences. The ethnographic research design involves the study of cultures of a particular group of people. The ethnographic design involves analysis of interactions within culture groups (Marshall & Rossman, 2016). Since the proposed study focuses on individual experiences that could affect multiple people, the ethnography research design is not appropriate for this study.

Research Question

What strategies do nonprofit leaders use to incorporate ICT into business operations to improve nonprofit organizational efficiencies and effectiveness?

Interview Questions

1. How is ICT used in your organization?
2. What key challenges have you faced when implementing ICT strategies into your organization, and how did you overcome those challenges?
3. What strategies do you use to incorporate ICT into your business operations?
4. How do you address key challenges to integrating ICT in your organization's business operations to improve organization efficiencies and effectiveness?
5. How does ICT technologies improve duties and tasks of the staff of your organization?
6. How does ICT technology improve services that are offered by the organization?
7. What additional information can you provide about ICT strategies used to increase the efficiency and effectiveness of business operations of your organization?

Conceptual Framework

The conceptual framework in this study is the information technology (IT) competency model. The U.S. Department of Labor, Employment, and Training (DOLETA) developed the IT competency model which was introduced in September 2012. The goal was to provide education and training to increase workplace efficiency. The purpose of the competency model developed by McClelland, Boyatzis, Sandwith, and Bassellier et al. is to increase managers' abilities to understand and adapt to new technologies. The IT competency model involves using technology to increase efficiency in workplace environments. The model is used to develop strategies for business professional in terms of developing skills in the workplace. The IT competency model is a conceptual framework that can help business managers obtain a better understanding of concepts, assumptions, expectations, and theories related to increasing employee competencies in the workplace (Imenda, 2014). Therefore, I propose the IT competency model to provide a framework for understanding managers' strategies for developing and delivering training and knowledge needed to adopt new technology and help increase the efficiency of participating organization business operations.

Operational Definitions

Information Communication and Technology (ICT): Technologies people and organizations use for information processing and communications (Zhang et al., 2008).

Nonprofit Organization (NPO): An organization that depends on volunteers as workers s and financial donors (Shehu et al., 2016). A nonprofit organization is an

organization that does not distribute surplus funds or profit to owners to further its goal or mission (Williams et al., 2013)

Organizational Effectiveness: An organization expends its resources to accomplish its mission without depleting its resources and putting undue stress on its employees and the environment (Thibodeaux & Favilla, 1995). An effective organization integrates a goal-based system and essential competencies while increasing productivity and cutting costs (Byham, 2017).

Technology acceptance model (TAM): A model that explains how technology and various aspects of it are received and used by users (Dziak, 2020).

Unified theory of acceptance and use of technology: A model that explains user intention to use an information system and subsequent usage behavior (Venkatesh, 2003).

Assumptions, Limitations, and Delimitations

Assumptions

There are three assumptions in this study. The first assumption is that participants selected for this study were honest, sincere, helpful, and knowledgeable when answering study interview questions. The second assumption is that participants provided honest, open, and unbiased responses to interview questions. The third assumption is that this study would benefit nonprofit leaders and positively affect social change in the south suburbs of Chicago.

Limitations

Limitations are particular potential weaknesses of a study that are usually out of the researcher's control and are closely associated with the chosen research design, statistical model constraints, and funding constraints (Theofanidis & Fountouki, 2018). There are two limitations in this study. The first limitation is that the sample size may be too small. The second limitation is some participants' responses may be biased.

Delimitations

Delimitations can be viewed as limitations consciously set by authors themselves. Delimitations are boundaries or limits of their work so that the study's aims and objectives do not become impossible to achieve (Theofanidis & Fountaouki, 2018). There are two delimitations in this study. This study involved only nonprofit organization leaders with ICT experience in the south suburb of Chicago.

Significance of the Study**Contribution to Business Practice**

This study's findings and conclusions may be of value to business practice by demonstrating how technology plays an essential role in improving business performance, business strategies of organizations, and achieving business missions. Technology can have a positive effect on increasing productivity (Williams et al., 2013). Technology is a tool that many organizations use for developing competitive advantages (Dyer et al., 2016). It allows organizations to strive to achieve their goals efficiently. Study results may increase the efficiency of business operations and decrease costs.

Improving business is essential for nonprofit organization leaders to fulfill their commitment to community members (Dobrai & Farkas, 2016).

Implications for Positive Social Change

Nonprofit organizations are social change agents (Norris, 2019). Nonprofit management education has involved developing skills necessary to lead nonprofit organizations to accomplish their missions and goals. The goal of an efficient technological environment is to provide better services more effectively. The adoption of technology can allow for increased services provided to communities. Leaders of nonprofit organizations could use this study's findings to increase both the breadth and organizational effectiveness of services for needy citizens.

A Review of the Professional and Academic Literature

The purpose of this qualitative single case study is to explore strategies used by nonprofit leaders to incorporate ICT into their business operations to improve organizational efficiencies and effectiveness. This qualitative case study involved a nonprofit organization that provides services to the community in the south suburbs of Chicago. To gain an in-depth understanding of the research topic, an extensive academic literature review was conducted to understand nonprofit business operations. Topics searched in this literature review included ICT, management and technology, business operations, operational efficiency, and nonprofit organizations. The literature review begins with an exploration of IT Competency Model, which was the conceptual framework for this study. Also discussed are three alternative models: the TAM and the unified theory of acceptance and use of technology (UTAUT) model.

Literature Review Search

To search for the literature in this study, I used Walden University Library and Google Scholar. Keywords used in the database search were: *ict, technology, nonprofit organizations, nonprofit leadership, business operation, organizational effectiveness, and management and technology*. Databases used were ABI/Inform, EBSCOHost, Emerald Insight, ProQuest, Scholar Works, and SAGE Journals. The literature review includes peer-reviewed articles, professional journals, dissertations, and published books. I reviewed 50 peer-reviewed articles, of which 85% were published between 2018 and 2022.

Table 1

Literature Review Sources Count

	Current Sources (1-5 Years)	Older Sources (Over 5 years)	Total Sources	Percent
Peer-reviewed journals	53	10	63	97%
Other sources	2	0	2	3%
Totals	55	10	65	100%

IT Competency Model

The conceptual framework in this study is the IT Competency Model. The IT competency model was developed by the DOLETA, and was introduced in September 2012. The mission of DOLETA is to provide education and training to increase workplace efficiency. The purpose of the competency model, developed by McClelland, Boyatzis, Sandwith, and Bassellier et al. is to increase managers' abilities to adapt to and

understand new technologies. The IT competency model involves using technology to increase efficiency in workplace environments. This model is used to develop strategies for business professionals involving developing skills in the workplace. It is a conceptual framework that assists business managers in terms of obtaining a better understanding of concepts, assumptions, expectations, and theories related to increasing employee competencies in the workplace (Imenda, 2014). Use of technology that can increase business operations of nonprofit organizations was featured in this study.

TAM

An alternative model is the TAM. The TAM was introduced by Fred Davis in 1989. It is a theory involving predicting the likelihood of individuals or organizations successfully adopting new technology (Dziak, 2020). The model involves business owners' favorable and unfavorable attitudes towards of technology. Unfavorable acceptance of technology translates to failure of technology implementation. Davis stated that the features of new technological systems influence users' acceptance. Use of technology has assisted individuals, businesses, and organizations to perform necessary tasks more quickly, effectively, and efficiently. Technology tools and machines allowed people to increase both productivity and speed. Computers and other advanced technology have become crucial aspects of many industries (Dziak, 2020). The relationship between technology and individuals can be complex and difficult to adapt to. Many users believe that technology eliminates jobs and opportunities and therefore resist adaptation. Some users resist technology due to high costs, high-risk investments, and lack of understanding of increasing productivity.

TAM factors are perceived ease of use, usefulness, and attitude toward using. Many TAM users customized the model to meet their own needs or used the original model to explain complex relationships between users and technology.

UTAUT

The UTAUT is a model that determines acceptance and use of technology. This model was completed and developed in 2012 by Venkatesh. The UTAUT involves user intentions to use an information system and subsequent usage behavior. Presence of computer and IT in organizations has expanded dramatically. Organizations have expanded their investments in the area of information technology. Venkatesh believes for technologies to improve productivity, they must be accepted and used by employees in organizations. The UTAUT) was formulated, with four core determinants of intention and usage, and up to four moderators of key relationships. The four key moderators are gender, age, experience and willingness to use. The four core determinants are performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003).

Venkatesh (2003) said performance expectancy is defined as the degree to which an individual believes that using the system will help him or her attain gains in terms of job performance. Effort expectancy is the degree of ease associated with use of the system. Social influence is the degree to which an individual perceives that it is important others believe that they should use the new system, and facilitating conditions involves organizational and technical infrastructures to support use of the system.

Future of Technology in the Workplace

Incorporation of technology in the workplace has resulted in job displacement. This has resulted in organizations investing in technology which leads to adapting to new processes (Newman & Gopalkrishnan, 2020). Technology has dictated changes in terms of responsibilities of employees and management. The transformative change could result in job displacement along with the retooling of employees.

AI (Artificial Intelligence) along with automation can affect employees and management decisions involving business operations. The emergence of AI is speculated to lead to transformative changes to the workplace and employees (Frey & Osborne, 2017; Illanes, 2018). AI is predicted to enable computers to analyze user experiences and preferences and apply that knowledge to perform tasks that are currently being done by people (Newman & Gopalkrishnan, 2020). AI is predicted to change or displace 47% of all occupations in the workplace (Frey & Osborne, 2017). AI is the future of technology in the workplace.

According to Dweck (2008), people have either a fixed or growth mindset in which they are willing to learn new things. If an employee has a fixed mindset, they are typically not likely to adapt to future processes (Newman & Gopalkrishnan, 2020). Organizations must determine how employees perceive the impact of innovative changes. Assessment of employee attitude will indicate actions organizations need to take and how to establish employee expectations. Organizational management, human resources, and organization development leaders have to prepare employees for technologically-changing work environments.

General Theory of Employment, Interest, and Money

Technological advancements have occurred since the Industrial Revolution. Knowledge has displaced labor and capital as the key factor of production (Humbert, 2007). The general theory of employment of interest and money was introduced by Jon Maynard Keynes in 1936. Technological unemployment can be defined as job loss due to technological changes or adoption of technology. Technological changes include labor-saving machines such as computers or automation. Both scenarios minimize human roles. Technological advancement requires advanced training of employees. Individuals who are not technologically trained have limited or selective employment opportunities. Keynes(1936) state that full employment is important to the economy. Full employment is employment of skilled and unskilled labor within a given time (Potters, 2020). Technological unemployment makes it difficult to achieve full employment due to increased demands for skilled labor in innovative work environments.

ICT

Bobsin, et al., (2019) addressed benefits of incorporating technology into nonprofit organization business operations. Also, nonprofit organizations lack management and technical expertise to adopt some technological advances. Bobsin, et al., (2019) said nonprofit organizations are intermediaries between business and government. Nonprofit organizations have volunteers performing some day-to-day tasks. Bobsin, et al., (2019) said significant challenges that nonprofit organizations face: management of the organization and adoption of ICT. ICT is known as a benefit to organizations, but

only a few organizations have efficient ICT environments. ICT plays an essential role in the operation of nonprofit organizations.

Dinesh & Given (2017) believe that technology is vital to origination's operations. Dinesh & Given (2017) focuses on the use of technological tools in nonprofit organizations. The technology tool specified in the research study assist in knowledge management activities. The non-profit organizations' use of tools and technologies for knowledge management study featured nonprofit organizations of various sizes in specifies the use of technology in the business operation of the organization. Canada and Australia. Organizations of different sizes and operating in different sectors were studied in two large-scale surveys. The result of the study is useful for practitioners of nonprofit organizations in understanding knowledge management tools and to scholars to further develop the knowledge management for nonprofit organization's domain. The problem statement. The qualitative analysis of the study indicate a number of tools, technologies and contextual details about the nature of the tools that are used.

ERP

Enterprise resource planning (ERP) is an integrated management software system. ERP systems are increasingly playing a central role in many organizations (Johansson, et al., 2016). Miranda, et al., (2016) suggest the adoption of the Enterprise Resource Planning (ERP) system for nonprofit organizations. Miranda, et al., (2016) believes that nonprofit adoption of an ERP system would be an innovative benefit. The researcher of the research study used a descriptive qualitative approach. The researcher conducted 17 structured interviews in gathering their data. The researcher believes that the adoption of

an ERP system would allow nonprofit organizations to achieve their objective. Enterprise Resource Planning system (ERP) is the integrated software management system that encompasses an organization's business processes. ERP allow an organization to collect, store, manage and interpret data through the use of the software. ERP consists of tracking income, management of funds, and databases that maintain organizational processing records. The software of the ERP system allows for data sharing across departmental boundaries and provides the ability to connect with outside funders. ERP is a comprehensive software tool that would allow nonprofit organizations to achieve their goals. The goal of a nonprofit organization has to include decrease costs and increase efficiency. The problem statement of the research study in question emphasizes efficiency in the business operation and technology use. ERP is an organizational technological tool that features the integration of business processes. The study features the advantages of ICT to an organization. Gordon & Lopez (2019) believe in using ICT for community-based organizations. The adoption of ICT is a qualitative study. The ERP adoption research study consist of interviewing other community-based organizations. ICT for the community-based organization would be known as civic technology. Civic technology consists of social media sites and mobile technology to track and monitor civic services. The development of civic technology has vastly increased since 2012. The ERP adoption study leads to a mixed-method study of 14 organizations. Data collection consisted of semi-structured interviews and observations. The researcher works to implement technological tools in organizations and to incorporate technology into the day-to-day operation. The research study's result responded to the questions of 1) how do

organizations adopt technology and maintain their mission? and 2) how do organizations maintain their relevance during this digital revolution? The response to the questions was that technology helped to pursue their mission but distract from their goal. The conclusion of the article indicated the difficulty of adopting a technological environment. CBO staff understands the advantage of technology but struggles to adapt to technology. CBO staff believes that technology would solve the problem of lack of efficiency. CBO must seek methodology to overcome the complexity of adoption and look at the effectiveness that the technological tool can achieve.

Information systems bridge the gap between technology and people. The conceptual framework of the study features management adoption of technology. Hwang (2017) states that the collaboration between nonprofit and profit organizations establishes a neighborhood information system (NIS). NIS intended to provide social, demographic, and economic information to the community. NIS is a hybrid of geographical information systems. NIS consists of a combination of efforts of foundations, universities, local government, and nonprofit organizations. Technology innovation that makes up NIB can alter the business of government. Public managers become a part of a team that is involved in mediating and negotiating policies and technology. Some scholars have indicated the need for additional study. Scholars see the development of NIS as a new governmental paradigm. Some scholars have identified key variables in the success of NIS. The collaboration of the NIS requires shared understanding and trust. The result of the study indicated a positive relationship between all parties involved in the partnership. Surveys and interview data supported the results of the study. The collaboration efforts

were supported by management. The development of NIS was successful in providing important information to the community. NIS has provided the community with more transparency. NIS is considered a paradigm of public administration. This study is a mixed-method study. The data collection efforts included a web survey, statistical analysis, and semi-structured interviews. The researcher initially identified the stakeholders of the NIS. Hwang (2017) used a survey to gather other informational needs. The last stage of the information gathering process included a meeting with project managers to validate the web survey's information.

ICT Model

The conceptual framework in this study features the information technology (IT) competency model. The goal of the DOLETA is to provide education and training to increase workplace efficiency. Manikas, et al., (2017) report a partnership between an academic researcher and a nonprofit organization. The academic researcher created a software tool to improve the efficiency of the work environment. The software tool improves the organization's transportation logistics and incorporated a lost cost software solution into the business operation. The nonprofit organization was an Idaho foodbank that transports food to various locations. The software tool created a more effective route planning process that decreases transportation time. The implementation of the software tool allows the organization to overcome some financial barriers. The academic researcher initiated the project, consisting of the interviewing two humanitarian organizations that transported food to distribution centers. After conducting interviews, the researcher creates a user's requirement list. The software system requires a data

source, a data interface, a travel matrix to collect travel time and driving directions, and a route optimizer. The system design resulted in improved vehicle routing and improved business operations. The collaboration concluded that many nonprofit organizations could benefit from low-cost technological expertise. The partnership increased the efficiency of logistics and improved business operations. The modified software reports real-time traffic and road closures. The academic researcher that can offer their time to assist nonprofit organizations would be a welcome benefit. Many nonprofit organizations have budgetary issues that would not allow for the purchase of expensive software tools.

McCully (2019) believes that ICT can improve the nonprofit organization's efficiency and effectiveness. McCully (2019) shows a relationship between information technology AI, nonprofit, and philanthropy. The author notes that information technology and AI have dramatically affected our society. The changes that dictate the advancement of technology occurring at a rapid rate. The changes that have occurred in the area of nonprofit and philanthropy are dramatic. The paradigm shifts of nonprofit, and philanthropy are due to the advancements of information technology. The topics are related due to the vast amount of information that is shared. The author explains that researchers have not given the topic as much attention as it deserves. Social scientists had little interest in the relationship between information technology and nonprofit.

Researchers consider the topic of nonprofit and philanthropy as one topic. In 2006, an organization was formed called Association for Research on Nonprofit Organizations and Voluntary Action (ARNOVA). ARNOVA was formed to expand on the research in the area of nonprofit management, education, community service, voluntary action, and

philanthropic studies. ANOVA allows for an academic-practitioner relationship to be established. The advancements in information technology have given nonprofit organization tools to improve their operations and donor relations. The process of fundraising has been introduced and transformed by social media. The creation of online technology has increased the fundraising of organizations. The article concludes by stating that the relationship between academia and philanthropy has dramatically improved. Social scientists are looking at the topic of IT and philanthropy as a future research topic.

Young (2018) discusses the relationship between technology and future nonprofit professionals. Young's article expresses the utilization of technology and how technology is incorporated into educational courses. Technology is a tool that is used to distribute and display information. Future nonprofit professionals must obtain the skills and knowledge to be a part of this technological society. Academic courses that are non-technical use technology to deliver course content. The process of using technology allows students to become more comfortable more digitally literate. Nonprofit organizations are using technology to provide services. Social media has become a part of the nonprofit organization's presence. Current nonprofit leaders were not trained in the area of technology. Future nonprofit leaders can benefit from modified curriculums that offer technology classes and technical course content or non-technical classes. Educators are challenged to use online coursework and social media in their curriculums to enhance the technical knowledge of their students. Educators are forced to alter their teaching methods to account for the technological incorporated curriculum. The article concludes

by stating that educators have the responsibility of educating current and future nonprofit professionals. The educator can alter the perceptions and behavior of nonprofit professionals. The technological world is becoming more complex. Nonprofit organizations must continue to advance technologically. Nonprofit organizations must rely on digital technology to be effective in this technological society. Education and training will allow for individuals to be more engaging, innovative, and strategic in the future.

Bobsin, et al (2019) believes that incorporating technology will benefit the business operations of a nonprofit organization. Raman (2016) explains the curiosity of academicians and nonprofit practitioners on the effects of ICT on nonprofit organizations. Technology is defined as social media, mobility, analytics, and cloud computing (SMAC) Manager of nonprofit understand that technology can assist them in meeting the organizations' mission. The researcher of the study analyzes managers of nonprofits' attitude towards the use of technology. The research used a mixed-method research design. The quantitative and qualitative tools were used to investigate the SMAC adoption. The author believes that ICT has made a tremendous social impact. The technology has transformed organizations and improved nonprofit organizations. The author states that ICT contributes positively to society. SMAC has been known to contribute towards social service sectors such as health, education, and digital divide initiative. The researcher is interested in determining what factors are considered when adopting recent ICT and the contribution to the nonprofit organization. Nonprofits are obtaining new ICT tools to assist with fundraising, volunteer activities, and marketing

efforts. The simpler and less expensive version of new ICT tools has been purchased by some nonprofit organizations. The researchers have investigated the organizational effectiveness of adopting new technology. The researcher is interested in determining if adopting the technology assist in the mission of the organization. The conclusion of the study resulted in the adoption of SMAC indicated a positive outcome such as organizational effectiveness and bridging the gap of the digital divide. The adoption of new ICT was based on performance expectancy and attitude to use. Nonprofit leadership expects the adoption would increase the efficiency of the organization. The study indicated that SMAC increased organizational effectiveness. The technology assists in donor management, recruiting of training volunteers, and management reporting. Researchers stated that the adoption of SMAC would be worth the investment.

The purpose of the competency model, developed by McClelland (1973), Boyatzis (1982), Sandwith (1993), and Bassellier et al. (2001), is to increase the manager's ability to understand and adapt to new technologies. Kisonzo (2017) reported that ICT (Information Communication and Technology) improve organization performance. Management of nonprofit organizations has a difficult time justifying the investment in ICT tools. The goal of SMAC is to establish a correlation between ICT investment, organizational performance, and the decision-making process. Kisonzo initiated a quantitative study that attempted to explain the interdependence of the predictor and outcome variables. Data was collected using measurement instruments and SPSS software to analyze the results. The results of the study revealed that it wasn't a direct correlation between ICT and organization performance. Bassellier et al. (2001),

believes SMAC will dictate a positive social change. SMAC is intended to educate nonprofit leaders on the investment of ICT. The research question involves the effectiveness and efficiency of the business operation of the nonprofit organization with the adoption of ICT. Zilic (2020) suggests that technical implementation and digital transformation increase the efficiency of a business model. The re-evaluation and implementation of ICT are required to keep up with the demands of dynamic markets. Zilic researched a shared service business model that was using ICT to create a more efficient environment. The efficiency of the business model requires organizational and technological changes. The articles outline the shared service business model and the benefit of implementing an ICT system. The conclusion of the research study resulted in the reporting of optimization, consolidation, standardization, and efficiency of the business model. ICT technology is essentially an efficient shared service model and to compete in the market of the business organization. Various service industries such as telecom, educational, public administration, and technology companies were the service industries in the study. The study concludes that ICT would increase efficiency and improve the business model of the shared service industry.

Technology Advancement

Technology advancement constitutes the knowledge that increases technology. Suryanegara et.al, (2019) reported that the role of technology is to comply to the demand of the market or to create a market through innovation. These roles of technology mark the first- and second-generation innovation models that drastically changed the world in the twentieth century. One example is the rapid development of Information

Communication Technology (ICT). ICT began with the development of technology to deliver voice communication. ICT described as a technological process that delivers information over sort of communications technology. The crucial point of the development of ICT was the emergence of the Internet. The advancement of ICT technology created the efficiency of industrial processes that is necessity pursued by every business entity. ICT technology enables industrial process efficiency and strengthens the competitiveness of products. In the article, Information Communication and Technology (ICT) as the Engine of Innovation in the Co-Evolution Mechanism, consist of fifteen papers dedicated to promoting ICT research that directly and indirectly contributes to innovation was presented. The studies of ICT in this document concluded that the research work would shape technological innovation and competitiveness.

Cybersecurity

Roman of FoxPointe Solution information technology developed ten recommendations for mitigating the risk of cybersecurity breaches. Nonprofit organizations collect private data and operational records. Nonprofit organizations typically do not place importance on data protection. Cybersecurity is an expendable expense during these times of reduced budgets, decreased donation, and inconsistent governmental funding. The recommendation for nonprofit organizations is to pick up Windows security patches, enable anti-malware software and firewalls, encrypt data and strengthen user passwords. Archibald (2020) said management should supply training for nonprofit employees in cyber security awareness.

I examined the effects of ICT on sales and employment of small and medium organizations from 2009-2013. The organization's study performed production functions such as producing output from the input of raw materials, incorporating labor, and generating capital. The research used the Cobb-Douglas model to categorize the operations of the organizations. The study indicated that hardware investments complemented labor by increasing organizational performance, and software and ICT staff investment decreased labor. The results of the study show that ICT investment affects employment in smaller organizations. The study resulted in assisting managers in responding to the challenges of ICT investment or employment. The researcher indicated that the study provided a framework for analyzing ICT investment and employment strategic significance.

The competency model featured in the conceptual framework indicates the importance of educating and training managers in technology. Increasing managers knowledge and understanding of technology will increase the acceptance of innovation. Zhang & Feeney (2020) reports that ICT (Information, Communication Technology) has many advantages and possibility in civic engagement and governmental agencies but have had limited success. The cybersecurity study revealed that the organizational culture that prioritized bureaucracy over participatory failed to implement ICT. Legal mandates in governmental agencies increase the adoption of ICT but not use it for participation. The study findings show the critical role of organizational culture in adopting of ICT and those legal mandates promote adaptation success. The cybersecurity study results indicated prioritizing bureaucracy over participatory culture is negatively affected by the

adoption of ICT. Bureaucracy-oriented departments tend to view the adoption of ICT as interfering with their pursuit of efficiency and effectiveness and are less likely to adopt them. Participatory organizations are more likely to adopt ICT for participation purposes. Researchers found no significant difference in organizational culture and using technologies for efficiency and effectiveness purposes. Archibald (2020) feels that bureaucracy- oriented departments using data sharing and work collaboration tools to achieve effectiveness and efficiency did not adopt ICT. The cybersecurity study results indicated that a bureaucracy-oriented government to increase ICT adoption when formally required to engage the public in decision-making was successful in their adaptation.

Antonioli et al. (2018) stated that ICT and environmental innovation (EI) are relevant waves of the ongoing technological revolution. Antonioli et al. (2018) said the higher the diffusion and intensity of ICT usage and EI, the higher a firm's productivity performance might be. The testing of the hypothesis consisted of a data survey from manufacturing firms in Northeast Italy. The research survey included detailed information on both ICT and EI. Antonioli, et al., (2018) study results indicates that the adoption of one innovative technology has no significant economic performance impact. The adoption of both technological innovations increases productivity and financial performance. The results of the study supports the hypothesis of the study.

Olubunmi & Samuel (2017) present a study that examines the use of communication technology in broadcasting. The case study focuses on the cost, effectiveness, and impact of ICT on the social relationship between the broadcast

advertising of different hierarchies. The survey method was used to obtain data from the subject. A structured questionnaire was used to collect both qualitative and quantitative data. A purposive sampling technique was adopted to get respondents that are directly involved in advertising, from the organization of the study. The results of the case study indicates that broadcast advertising increase business with the use of appropriate ICT facilities.

The addition of ICT is a positive component of an organization. Wu, et al. (2020) explain the impact e-commerce had on a poor, remote village in China. The case study consist of three small villages in China and how ICT (specifically e-commerce) is used to develop a rural e-commerce system. The document described the challenges encountered in creating an e-commerce system to supply three villages with some essential items. ICT has allowed villagers to generate business opportunities via online stores. Online stores generated an income of 2.44 million. ICT allowed villagers to improve healthcare and increase educational levels. ICT provided individuals of the villages to communicate with others and participate in social activities to enhance their well-being.

ICT involves the knowledge and sharing of information via technology. Sinaeepourfard, et al., (2020) reports that information communication and technology consist of Internet of Things (IoT) devices, computing platforms, and data storage media. Many smart cities are ICT resources to collect data. Data management systems provide users resources and businesses with information. The article outlines two methods of using ICT to create management solutions for modern cities that depend on ICT. Many cities are starting to use ICT strategies to provide facility management services, city

planners with data, and technological devices to enhance citizen's engagements. Data management is an essential element of ICT management strategy. The concepts of centralized and distributed-to-centralized data management (D2CDM) architectures organized data acquisition in networks. Using ICT for smart cities was increased services, optimized data collection, quality data storage, and combined software services. The conclusion of the study increases the possibilities for the future development of smart city ICT technology systems.

Covid-19 has caused an increase in technology in areas of work, education, and play. Abdillah, et al., (2020) reported using ICT during this era of the Covid-19 pandemic. Covid-19 pandemic marks a period of using online media for work, play, and learning. This article features a learning environment and counseling services. School Counselors are using ICT to provide learning and counseling services to students. A quantitative research design is used for this study. A structural equation modeling tool was used to test the correlations between the variables. The study consists of 214 school counselors and the data collection tool of an online questionnaire. The study results showed findings in which all attributes have a significant outcome on the use of ICT on School Counselor. The study results indicated a positive response to providing learning and counseling service during the Covid-19 pandemic. The results have led to the increasing use of ICT.

The competence model supplies managers with technology training and education. Infante-Moro, et al., (2021) report on a study that consists of the acquisition of ICT skills. ICT skills benefit student in the training programs of the educational

institution. This study attempted to analyze the students' ICT skills in Business Sciences and Tourism of the University of Huelva. ICT skills are noted as most demanded by potential employers. The research study uses the data gathering tool of a survey questionnaire. Forty-six college professors performed the study. The study intends to promote and increase the ICT skills of students to provide better career opportunities. Also, the study is intended to measure the commitment of the professors to teaching ICT skills. The result of the study indicated that ICT skills play an essential role in the training programs of educational institutions. The results suggest that students receive the necessary training need for future employment opportunities. Also, professors are committed to the importance of ICT skill training.

Disruptive technology is known for altering business operations. Disruptive technology includes mobile devices. Mobile payment allows any mobile device user to conduct commercial transactions without the use of cash or credit cards (Schmidhuber, et al., 2020). Mobile phone payment is a disruptive technology that, despite its many advantages, has not been widely adopted. This study investigates the hesitancy to accept mobile device technology. The mobile technology used in this study was mobile payment. According to the study's findings, perceived usefulness, perceived compatibility, perceived personal innovativeness, and perceived social influence all positively influence the intention to use mobile payment services, while perceived risk has a negative impact (Schmidhuber, et al., 2020). We build on the well-established theoretical framework of the technology acceptance model to shed light on the factors that influence individuals' intention to use mobile payment (Schmidhuber, et al., 2020).

A survey of 670 people was used to test the technology acceptance model. According to the survey, user perceptions. The study's findings contribute to a better understanding of technology and disruptive technology. Understanding of technology influenced technology acceptance positively. The proposed study's conceptual framework is management increased technology acceptance through education and training.

Cloudinary is a media management company that provides services to nonprofit organizations. Cloudinary for Nonprofits offers eligible organizations discounted access to Cloudinary's award-winning image, video, and digital asset management solutions, allowing them to easily create, manage, and distribute content that supports their mission (Cloudinary,2020). Cloudinary's management believes that nonprofit organizations are dedicated to addressing social issues, and that as a company, we are assisting them in their efforts. Reaching the intended audience is critical, and media technology can help. Nonprofits, like any other brand or business, use images and video to build and improve user engagement (Cloudinary,2020). Cloudinary is dedicated to providing organized and engaging technology to nonprofit organizations. The service is provided in a timely and cost-effective manner. The proposed study's research question focuses on the incorporation of ICT into business operations in order to improve organizational effectiveness and efficiency.

Nonprofit Organizations and Leadership

Social media, mobile technology, and cloud computing are popular technological advancements in today's society. According to Boles (2019), the use of technology will improve the efficiency of nonprofit organizations and social workers' operations. The use

of technology will improve a nonprofit organization's operational workflow. Social media, mobile technology, and cloud computing will improve a nonprofit organization's services and operations. According to Boles (2019), many nonprofit organizations use technology, but increased knowledge and innovation would reduce costs and increase funding. The final section of the article discusses the potential technological barriers that many nonprofit organizations may face. The report's conclusion stated that technology increases a nonprofit organization's chances of success. The organization could use technology to provide services to funders, social workers, and fundraisers. Furthermore, by incorporating technological services, the organization has the potential to reach out to more funders and increase its contributions. This article's topic corresponds to the research questions of my research study. The specific business issue is that nonprofit leaders lack a strategy for incorporating technology into the organization's business operations.

A nonprofit corporation is an organization that exists for reasons other than profit. Gunawan and colleagues (2017). Nonprofit organizations are formed in response to an economic or social need. Any nonprofit organization's mission is to provide services and financial support to a cause. Gunawan and colleagues (2017). Every nonprofit faces the challenge of raising funds to support their initiative and operations. A nonprofit must make every effort to keep donors and project funding. The article's author discusses the significance of a web-based system for tracking donors and organizational projects. Earned Value Analysis is the name of the web-based system (EVA). The Earned Value Analysis system was created to aid in project management. The system keeps track of

project status and assists management in making decisions. The web-based system's implementation displays project progress and financial requirements. Nonprofits must sometimes make the same decisions as for-profit institutions. The web-system assists the organization in reducing financial risk and making sound financial decisions. The EVA system's implementation increased donor trust. The organization can provide precise financial data to donors while also allowing the organization's management to address the organization's needs. Social media is an ICT component that will increase the organization's visibility and efficiency.

A computer system process data into information. Analysis is the process of breaking down a complex process into elements. Switzer, C. (2017). discuss the topic of a nonprofit organization that has adopted a computer system and its development analysis process. Typically, the process is to hire a computer contractor, and tell them what you want the system to do. The computer contractors deliver what they think the manager have requested. The process typically does not match what was requested, and the organization must deal with the inefficiencies until a recreated system is developed. The author of the article discusses the process that several organizations have adopted. The adopted strategy is called product management. Product management is a system that allows for frequent changes. The strategy used to create the system combine management with software development. The technical principle is called agile. A team of developers would determine what would best serve the individuals that use the technology and create it using limited resources. The product management approach worked well for nonprofit organizations with limited resources for technology. The expense of adopting a new

system traditionally would cause the organization to sacrifice some other organizational needs. The nonprofit organization that adopts the product management system invests money into a system that allows for continuous changes and better performance.

Many non-profit organizations collaborate on projects. Nonprofit organizations compete with one another for funds and constituents. Bloch and colleagues (2020) discuss the interdependence of nonprofit organizations. A board interlock occurs when a member of one organization's board joins the board of another. The connection between nonprofit organizations enables the exchange of information, knowledge, and practices. According to academic research on for-profit entities, interlocks are a deliberate strategic choice made by organizations (Hallock 1997). When organizations form bonds, they share policies, governance, and organizational efficiency. The sample data came from 3,000 nonprofit organizations from various industries in the Washington, DC metropolitan area. The study resulted in increased efficiency and donations. Adoption of ICT and increased efficiency may distinguish nonprofit organizations.

One of the types of nonprofit organization promotes health care for individuals who need health care information. Nonprofit organizations have used advertising campaigns but have found little success. The lack of success with the advertising campaigns can be attributed to challenges with disseminating information to the appropriate target group, often because the target audience is not easily identifiable (*Bloom, et al., (2020)* states that that social media could be used to solve the problem *ICT*, through the use of social media, have created a means for meeting the challenge of engaging individuals that would benefit from this information. Nonprofit organizations

increasingly rely on social media to effectively design health promotion strategies (Chou, et al., 2009). Vedel, et al., (2020) said nonprofit organizations developed their social media strategies and how nonprofit organization attain their health care promotion goals. The information obtained during the study was intended to impact of the health care promotion and assist other organizations with the same goal. Nonprofit organizations that have implemented a social media strategy address their health care promotion goals have found it beneficial in achieving their organizational mission.

Nonprofits have initiatives, a mission, and goals. Wieters et al. (2020) believe that program evaluations are an important indicator of whether a nonprofit is effectively meeting the needs of its clients or members. Nonprofit organizations that have received grant funds have met the grant provider's requirements. The evaluation of programs offered is a barometer of the organization's success and shortcomings. Evaluation data is used by organizational leaders to determine organizational effectiveness. There are various types of program evaluations. The evaluation's goal is to assess processes and outcomes. The 360-degree program evaluation is a feature of the evaluation program. The 360-degree evaluation program includes tools and techniques that produce data, both internally and externally collected, that is intended to determine the effectiveness of program strategy and leadership. According to Wieters et al. (2020), the following questions are used to evaluate the organization:

How does the program align with our mission, vision, values, and the specific grant requirements for funding the program?

How can we ensure that our program provides high-quality services to our clients?

What works and what doesn't in the program?

Are there any issues or gaps in our programs that need to be addressed? Are the right people doing the right things?

What outside research exists that has an impact on the program?

Is our strategic plan demonstrating the program's current and future needs?

The use of ICT is required to respond to the questions and collect the data needed for the evaluation.

Boop & Volda (2020) reports Human Computer Interaction (HCI) has been linked to nonprofit organizations for several years. NAME OF AUTHOR (YEAR) said the field of HCI has the opportunity to be productively and ethically engage in the development of nonprofit stakeholders. HCI researchers have focused on a suite of questions concerning nonprofit organizations and stakeholder's voice. By voice in research, it means the degree of power and agency that stakeholders have in providing input into research (Boop & Volda, 2020). The questions centered are stakeholder involvement are acknowledgment of the importance of stakeholders, invitation to be a research participant, affecting the style of methodological engagement, and have an authentic voice in the eyes of the researcher. HCI researcher believes that stakeholders should have input in the area of information technology. ICT incorporation in nonprofit organizations improves stakeholder involvement.

Social media is a type of technology that allows people to share information and ideas with one another. According to Goldkind (2015), social media has become

ubiquitous in everyday life and a part of many organizational cultures and communications plans for nonprofit organizations that have adopted technology. This qualitative study investigated the use of social media and other communication tools within nonprofit human service organizations. The research questions were as follows: What is the prevalence of social media use in nonprofit organizational settings? What support structures encourage social media use, and what institutional barriers prevent it in the workplace? The interviews yielded four topics: social media supports, social media resources, technological barriers, and experiential use of social media. The study's conclusion resulted in nonprofit leaders and executives gaining knowledge and training on social media tools. The study's participants were surprised by their lack of knowledge about social media and the effects of using technological tools. The researcher believes that more research is required. This article closely reflects the research study's problem statement. The research question is whether nonprofit leaders have the necessary expertise to integrate ICT into business operations. ICT includes social media.

The Comparative Nonprofit Sector Project is managed by John Hopkins University. The undertaking. According to the project findings, 1) the nonprofit sector is the world's seventh-largest economy, 2) the nonprofit industry is as large as the global construction industry, 3) in the United States, 22% of the population volunteers their time, and 4) 10% of Americans work in the nonprofit sector. Nonprofit management accountants adhere to best practices in accounting, finance, and governance. Technology and its users play an important role in this effort, and management accountants can assist nonprofit organizations in ensuring that these tools are used correctly and that established

best practices are followed (Maguire, 2016). Understanding how nonprofit organizations use technology aids in implementing best practices. The annual "Blackbaud State of the Nonprofit Industry Survey" polls nonprofits around the world on their use of technology and the Internet. The survey received responses from over 2,000 nonprofit organizations in ten countries (Maguire, 2016). The survey respondents reported a significant disparity between the importance of a single database of supporter information, using technology, and the performance of their own organization in achieving that goal. ICT can be used to bridge the gap in business operations, organizational efficiency, and achieving the mission goals of a nonprofit organization.

A nonprofit organization's chief financial officer faces numerous important responsibilities and challenges. West & Ries (2017) discuss the role of the chief financial officer in a nonprofit organization. A nonprofit organization's CFO is responsible for balancing strategy and operations, funding and financial sustainability, communication, leadership, governance, people management, information technology, compliance, regulations, and unfunded mandates, and mitigating and managing risk, including reputational risk (West & Ries, 2017). The CFO must be familiar with the organization's mission and funding programs. Program funds are required to keep the organization's operations running. The organization's CFO is in charge of employee benefits, human resources, and information technology. The NPO CFO's role is to be a strategist and to keep the organization's mission relevant.

The board of governance plays an important role in the existence and administration of a nonprofit organization. According to Tysiac (2018), the success of a

nonprofit organization is dependent on the recruitment, retention, and training of its governance. Many nonprofit organizations struggle to find knowledgeable, engaged board members. Board members must be trained on how to fulfill their oversight role, educate on their responsibilities, and contribute to the strategic planning process. A nonprofit organization's other task is to find friend raisers or friends of fundraisers. Many non-profit organizations hold events to present their mission and vision. Nonprofit organizations are always looking for new funders and board members. Because of the, it is difficult to find board members.

Nonprofit organizations are formed to address a societal need. Tyler (2018) reported on the complexity of the non-profit environment in his paper "Nonprofit Leaders' Perceptions of Leadership Development and Leadership Competences." According to research, many non-profit leaders are unfamiliar with non-profit leadership and practices. The qualitative phenomenological study aims to improve understanding of nonprofit leader practices. In addition, the research study demonstrated how nonprofit leaders develop the competencies necessary to effectively lead their organizations. The goal of the qualitative phenomenological study was to investigate the competencies needed by nonprofit leaders and to transfer competence in training and later practice. According to the research study, the key competencies of the nonprofit executive are: emotional quotient, communications skill, relationship building, financial, strategic planning, human resources, and fundraising. The study's findings indicate that non-profit leaders need a broad, multifaceted skill set to succeed in the complex environment in which NPOs operate. The qualitative phenomenological research concluded with a better

understanding of the competencies of nonprofit leaders and how to improve those skills through leadership development programs. Leaders' lack of skill extends to incorporating ICT into the nonprofit organization's business operations.

Technological advancements are progressive and innovative. Several nonprofit organizations have taken a forward-thinking approach to technology. Product management is a technology philosophy used by nonprofit leaders. The product management philosophy regards technology as a living thing that is constantly changing and necessitates constant maintenance (Switzer, 2017). The product management philosophy is made up of software development principles that determine what is best for technology users. Product management principles are implemented by engineers and software designers. A product manager determines what is most important and what will work best for the organization. Product managers are in charge of overseeing how various parts of the organization collaborate on a set of technologies (Switzer, 2017). This method enables a nonprofit organization to implement strategic technological processes and continuously improve its business operations. This study's research question revolves around the incorporation of ICT to improve business operations.

Nonprofit organizations use social media as a communication tool. Ihm (2019) investigated nonprofit organizations' (NPOs') social media strategies. Many nonprofit organizations use social media to strengthen stakeholder relationships and communication. Stakeholders can communicate with one another using social media to build relationships and mutual interest. The study focuses on different types of nonprofit organizations and how they use social media. The study's findings in the examination of

each type of relationship that resulted in an autonomous network. According to the study, various networks are embedded in social media websites. The study's findings improved understanding of NPO virtual communities, which translated into transformative collective actions, social change, and collaboration with mutually imitative organizations. Social media is an example of ICT. The ICT strategy of nonprofit organizations is the focus of the research study.

Nonprofit organizations rely heavily on fundraising. The success of crowdfunding fundraising campaigns was investigated by Salido-Andres et al. (2018). Beneficiaries are the focus of the crowdfunding campaigns. Digital platforms were used to promote the crowdfunding efforts. The promotion consisted of three parts: 1) an examination and review of the literature used to influence the volume of potential beneficiaries. 2) Hypotheses are proposed linking the determinants identified in the literature to the crowdfunding campaigns, and 3) quantitative analysis is used to assess the explanatory capacity. According to the study's findings, crowdfunding campaigns for charitable causes promoted through digital platforms were successful. The use of a digital platform reflects the use of information and communication technology in nonprofit organizations. This study focuses on the use of ICT in nonprofit business operations.

Nonprofit organizations must create an operational strategy. Tenney and Sheikh (2019) define Strategic Roadmap (SRM). A strategic roadmap is a plan for developing a long-term strategy for a company. As part of a long-term plan, a strategic roadmap can include operational and procedural components. The strategic roadmap includes trends for nonprofit organizations as well as operational plans for nonprofit management and

planning methodologies. According to Tenney and Sheikh (2019), nonprofit organizations face some strategic challenges. Some nonprofit organizations are inefficient in terms of management and operations. The article's authors believe that developing a strategic roadmap would benefit many small-to-medium nonprofit organizations.

Nonprofit organizations are growing in number as a result of a societal need. Nonprofit organizations provide critical services to many communities. Nonprofit organizations are funded in a variety of ways. The management of organizational income is critical to the organization's survival. A strategic roadmap is a tool that can be used to improve operational and managerial efficiency. The research study's problem statement emphasizes how a lack of managerial strategic planning and skills negatively impacts business operations. The study emphasizes how technology can improve operational efficiency.

Management consulting services have aided organizations in keeping up with industries' rapid growth. The management consulting industry is highly competitive. Management consulting firms that meet the challenges of automation, democratization of information, big data, and scarcity of resources gain a competitive advantage. The goal of this research is to look into how organizations used agility and flexibility to reinvent their business models in order to adapt to a rapidly changing technological society. The researcher interviewed several management personnel from a large consulting firm in Portugal. According to the study's findings, organizations try to differentiate the services they offer and deliver. Consulting services must adapt to a business model that allows for digital migration. The use of ICT accelerates digital transformation. Social media has

been used as a tool by successful nonprofit organizations. Milde & Yawson, (2017) detail the social media engagement of successful nonprofits and developing recommendations for effective social media plans to increase the visibility and service areas of public service organizations. The successful nonprofits imitated public service activities tying online effort to the mission of the organization. The nonprofit incorporated the social media existence with the mission of the organization. Maintaining an active presence online is and will continue to be an essential component of marketing and communications strategy (Worth, 2013). Marketing and communication is essential for nonprofit that depends on public funds social media use has a positive relationship with engagement and its three sub-categories, that is, social capital, civic engagement, and political participation (Skoric, Zhu, Goh, & Pang, 2015). The conclusion of the study indicates that the success of the incorporation of social media included those goals and strategy of the organization. Social media is a part of ICT and organizational effectiveness and efficiency.

Operational Effectiveness

Organizational effectiveness is sometimes linked to information systems. The research looks into the impact of blockchain technology and information systems on the effectiveness of organizational learning. Block chain technology is a digital ledger of transactions that is duplicated and distributed across the entire computer network. Turi et al. (2020) investigated the impact of information systems and blockchain technology on the effectiveness of organizational learning. Blockchain technology is a system for recording transactions. The study included data collection from information system

faculty and staff at Pakistani universities via interviews. The information gathered consisted of documented resistance to the organizational learning process in order to improve effectiveness. This study employed a qualitative approach. According to the study's findings, senior faculty members' support is critical in the acceptance of an implemented information system. In this study, both universities implemented an information system and a block chain to improve organizational learning effectiveness and organizational development and to envision their knowledge workers being more productive and efficient (Turi, et al., 2020). The study's findings include a recommendation for further research into the use of blockchain technology for organizational learning effectiveness and development. According to the study, blockchain technology can be used in the learning and management systems, as well as decision-making processes. The use of technology to improve organizational effectiveness corresponds to the study's research question, which states that incorporating ICT into business operations improves organizational effectiveness.

Many of the nonprofit organization's employees believe in the organization's initiative. Mendoza-Walters and Ivanov (2016) published an article that discussed Jacque's theory. Jacque's theory is directly related to organizational structure. Jacque's theory considers the time it takes an employee to complete the longest task and uses it as a proxy. The collected data is used to improve the institute's organizational efficiency. Jaques philosophy strives to create the best organizational structure possible. Organizations that adhere to this optimal organizational structure have the highest productivity, morale, and overall employee satisfaction (Mendoza-Walters &

Ivanov,2016). Optimal organizational structure translates into organizational efficiency, which improves business operations.

Many organizations use innovation to become more efficient. Innovation is generally defined as the generation (development) or adoption (use) of new ideas, objects or practices (Amabile, 1988; O'Toole, 1997; Rogers, 1995). Chowdhury, et al., (2020) perform a study that featured radical human resource innovative changes to increase organizational effectiveness. The study consisted of thirty organization from various industries. The innovative tools that were implemented included Analytic Hierarchy Process (AHP), TOPSIS and Hierarchical Regression analysis. Radical HR Innovation is a complete change, the outcome of which is new to the organization resulting in organizational effectiveness (Seng et al, 2011). Innovation is a process that constituent initiation, adoption and implementation. Innovation initiation is an introduction to the process, Innovation adoption is the acceptance of the idea of innovating a process. Innovation acceptance includes acceptance by the users that will be using the innovative tool. Organizational effectiveness can be evaluated by assessing the current state after the implementation of the innovation. Innovation is effective when it consists of process improvements. Seng et al., (2011 analyzed the relationship between innovation and organizational effectiveness. The study results acknowledge a positive relationship between innovation and organizational effectiveness. The findings suggest that process and radical human resources innovations influenced organizational effectiveness significantly (Chowdhury, et al., 2020). The research question of my study states that the incorporation of ICT into the business operation improve organizational effectiveness.

Many competitive environments look to technology to stay competitive and to become more efficient. Innovation is a central feature of competition and firms possessing technological capabilities create innovations through successfully implementing new techniques (Chen, et al., 2014; Prajogo, 2016). Technological capabilities facilitate the improved products and services to the market (Chang, et al., 2012). Bustinza, et al., (2019) believes that technology capabilities and resilience capabilities lead to organizational effectiveness. Technology capabilities allows for an organization to meet the challenges of the industry. Resilience capabilities is an organization ability to respond to change and uncertain conditions. The conclusion of the study results in an increased understanding of the relationship between technological and resilience capabilities and how it leads to organizational effectiveness. The incorporation of technology lead to organizational effectiveness.

A high-performance work system and a quality management system are conceptual tools for increasing organizational effectiveness. Some manufacturing and service organizations have used one or both concepts to improve organizational effectiveness. This study focuses on the relationship between quality management system and high-performance work system concepts that affect organizational effectiveness directly and/or indirectly. The study's researcher proposes combining the two conceptual concepts of quality management system and high-performance work system. The study's findings make three significant contributions: 1) Combining the concepts' implementation gives organizations confidence in using both the quality management system and high-performance work system practices. 2) Quality management system practices can be used

at the top-level and core of an organization, and 3) the combination of quality management system and high-performance work system at the core level is related to quality management system top-level practices and organizational effectiveness. The study's findings, supported by the use of structural equation modeling, indicate that an integrated framework of the two concepts would improve organizational effectiveness. This study focuses on the use of comparative analysis to improve organizational performance by facilitating knowledge sharing and improving business processes.

The tools that are used to improve organizational business performance through knowledge sharing and innovation. The study investigates critical operational factors and employs comparative analysis to examine the relationship between knowledge sharing, business processes, and organizational performance. There are 28 cases in the collection process. The study's findings revealed that knowledge sharing and the business-knowledge process significantly contributed to organizational performance improvement. According to the research question, technology can improve business operations and organizational effectiveness.

Many businesses strive for organizational effectiveness. Despite rising travel demand, the hospitality industry is in flux in an era of industry disruption via innovative business models (Manoharan & Singal, 2019). Given that the goal of most business organizations is to maintain a competitive advantage, competitive advantages can be harmful to firms that are struggling to survive in a competitive industry. Organizational effectiveness can be defined as the achievement of goals outlined in the mission or vision statement of the organization (Manoharan & Singal, 2019). Previously, approaches to

organizational effectiveness included goal attainment, system resource procurement, and internal process alignment (Manoharan & Singal, 2019). Although academics have used organizational performance as a proxy for organizational effectiveness, the two concepts are distinct. Performance studies often focus on a single aspect of effectiveness, such as innovative performance, service performance, brand performance, financial performance, or sales performance (Nazarian et al., 2017). The research study focuses on the role of innovation in organizational effectiveness.

The measurement of organizational effectiveness in the healthcare supply chain industry is the focus of this research study. The system theory was used in the study, along with the Supplier-Input-Process-Output-Customer tool. The system tools were used in a variety of health-care supply chains. The researcher used an exploratory approach to investigate and quantify the significance of various organizational effectiveness factors at various nodes of the healthcare supply chain. A two-stage questionnaire process was used to collect data from personnel in the UAE's healthcare sector (Hussain, et al., 2020). Sixty-two organizational factors were identified in the research study. The healthcare chain was studied using the Supplier-Input-Process-Output-Customer structure, with a qualitative approach to measuring organizational effectiveness (Hussain, et al., 2020). The study identified key factors for increasing the effectiveness of healthcare organizations. The study is thought to be useful for healthcare professionals seeking organizational effectiveness. The research question focuses on the application of technology to improve organizational effectiveness.

E-government is the use of ICT to conduct government business. This study looks at the e-government procurement system, stakeholders, and performance metrics. The study includes stakeholder identification and performance metrics. There were five internal stakeholder groups identified: From stakeholders' perceptions, eight measures and 44 corresponding metrics were consolidated, and 21 significantly distinct performance metrics were identified (Chomchaiya & Esichaikul, 2016). The overall re-categorized e-GP internal stakeholders were discovered, and a distinction between "user" and "service support staff" was made based on their various roles and responsibilities, as well as their perception of the importance of e-GP performance (Chomchaiya & Esichaikul, 2016). According to the study's findings, management and auditors can be assigned transparency and effectiveness measures, while service support staff and service users can be assigned contract management and efficiency measures. The use of technology assesses the effectiveness of the e-government system. The value placed on metrics and measures reflects the desire for e-GP success based on mimetic forces (Chomchaiya & Esichaikul, 2016).

Technology tools aid in the creation of an efficient organizational environment. A high-performance work system and a quality management system are conceptual tools for increasing organizational effectiveness. Some manufacturing and service organizations have used one or both concepts to improve organizational effectiveness. This study focuses on the relationship between quality management system and high-performance work system concepts that affect organizational effectiveness directly and/or indirectly. The study's researcher proposes combining the two conceptual concepts of quality

management system and high-performance work system. The study's findings make three significant contributions. The contributions were the implementation of concepts that give organizations confidence in using both quality management system and high-performance work system practices, the quality management system practice that can be used at the top-level and core of an organization, and the quality management system and high-performance work system at the core level of practices and organizational effectiveness. The study's findings, supported by the use of structural equation modeling, indicate that an integrated framework of the two concepts would improve organizational effectiveness. This study focuses on the use of comparative analysis to improve productivity by facilitating knowledge sharing and improving business processes.

Management and Technology

ICT is becoming more widely used as a necessary tool. ICT demands were calculated using a six-item scale based on responses to various questions. The questions were graded on a scale of 1 (extremely high) to 5 (extremely low) (no use of email or computer in my job). The study found that the highest prevalence of ICT demands varied by industry managers, non-managers, and educational levels. Managers in community service, education, and healthcare have a 95 percent confidence rating (Stadin, et al., 2012). According to the researcher, many managers have increased their exposure to ICT tools. The study's conclusion resulted in managers seeking ICT to improve the work environment. The IT competency model was developed by the Department of Labor Education and Training in order to increase managers, IT training, education, and acceptance.

Managers in various industries are turning to innovation to solve problems. Lousa and Gomes (2017) investigated the impact of technology on organizations during this period of rapid innovation. The study evaluates the technological impact on organizations, taking organizational size and age into account. According to the researchers, an organization's technological influence is determined by its size, age, and innovative perspective. The exploratory study was conducted with Portuguese firms. According to the study, employees in older and larger companies were older and had more seniority. The organization is less innovative and learning oriented as employees get older. The study's findings did not indicate that the size of the company or training activities played a role. According to the study's findings, small businesses with managers who participate in training are more willing to innovate. Larger companies with managers who participate in training activities are more likely to innovate in their processes (McGuirk, et al., 2015). The IT competency model serves as the study's conceptual framework. The model's goal is to improve managers' technology training and understanding.

NPOs are non-profit organizations with the mission of improving society in some way, often by addressing a need that is not or cannot be met by for-profit businesses or government agencies (Gratton, 2018). Dr. Gratton observes that many non-profit organizations face numerous challenges in the areas of fundraising, finances, competition, personnel, and technology. According to Dr. Gratton's research, many non-profit organizations do not strategically plan for the future. According to Dr. Gatton, non-profit organizations do not use strategic planning as an organizational development tool.

Organization development is a tool for systematically changing an organization's strategy, structure, culture, and processes. Organizational development leads to increased organizational effectiveness. Dr. Gatton came to the conclusion that non-profit organizations play an important role in meeting society's social and economic needs.

Many non-profits are so focused on day-to-day operations that they are ill-equipped to manage the strategic and systemic changes needed to thrive in the future (Gatton, 2018). Dr. Gatton advises using strategic planning for organizational development. The study's findings revealed a lack of strategic planning as a tool for organizational development. Technology has been identified as a challenge for nonprofit organizations. This study's researcher is looking into the use of technology in nonprofit organizations.

Because of organizational demands, the educational requirements for nonprofit leaders must change. Nelson (2020), of the University of Memphis, addresses the nonprofit concentration curriculum needs in the academic master's program of public administration. The researcher followed the Nonprofit Academic Center Council's guidelines (NACC). The guidelines were developed based on the current perceptions of nonprofit stakeholders and the knowledge required for a successful nonprofit organization. An operations-based education is perceived to be necessary for a nonprofit leader.

Furthermore, in order to compete in the nonprofit industry, nonprofit leaders must be strategic. For future nonprofit leaders, NACC emphasizes information technology, marketing, and communication skills. The study's findings provided educators with the

information they needed to update the nonprofit curriculum to meet the needs of organizational and stakeholder stakeholders, as well as educational standards. This study's conceptual framework reflects the need for more nonprofit leadership education.

There is plenty of evidence demonstrating that volunteering generates a wide array of benefits for individuals, communities, and society at large (Aydinli-Karakulak et al., 2016). This research study features the role of technology in the management of volunteers. Chui and Chan (2019) emphasizes the use of technology in recruiting, managing and retaining volunteers in nonprofit organization. The study consists of investigating eight nonprofit organization. Data collection was via interviews with individuals of the nonprofit organizations. The researcher investigated how technology was used to improve the effectiveness of volunteer management. The results of the study revealed that technology improve recruitment by increasing and diversifying of obtaining volunteers, accelerating the process of volunteer matching and increased the efficiency of the administrative process of volunteer management. In addition, the study revealed technology resistance and volunteer accountability. Success of technology in volunteer management depends on technological acceptance, nonprofit management adaptation and the ability to actualize capacity optimizations. The result of the study reflected the utilization of technology by management of volunteers. Technology use in volunteer management is contingent on how well volunteer managers are able to actualize the notion of capacity optimization and the Implications for enhancing organizational capacity in volunteer management (Chui et al., 2019). The conceptual framework of the study features the technology education and training of nonprofit management.

Healthcare is being transformed by technology. Data feedback technology has the potential to support quality improvement (QI) in health care (Tolf, et al., 2020). When technology is used to improve quality, management must understand processes and data in order to evaluate organizational systems. The purpose of this study is to investigate the factors that influence the adoption of a technology-supported QI program in an obstetric unit using a complexity-informed framework (Tolf, et al., 2020).

Three focus group interviews were conducted as part of this study to collect data from the use of an analytical tool to measure performance. The data from the analytical tool appear to support quality improvements. The study's findings support the use of technology for continuous quality improvement. By providing timely and adequate feedback on performance, technology has the potential to enable systematic Quality Improvement. Managers strive to improve quality in their areas of responsibility. Adoption of such technology is complicated and necessitates a willingness to learn and improve gradually (Tolf et al., 2020).

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support quality improvements. The study's findings support the use of technology for continuous quality improvement. By providing timely and adequate feedback on performance, technology has the potential to enable systematic Quality Improvement. Managers strive to improve quality in their areas of responsibility. Adoption of such technology is complicated and necessitates a willingness to learn and improve gradually (Tolf, et al., 2020). This study's conceptual framework includes technology education and training for managers, as well as the improvement of business operations.

Many managers are in charge of coaching, teaching, and training their employees. This qualitative study investigated managerial coaching to facilitate employee development in a large UK higher education institution's IT department (Dawber , 2019). A grounded theory approach was used in this study. This qualitative study's findings point to more adaptable supportive managerial behavior. The systematic collaborative work environment translates into increased employee development, as evidenced by the development of a framework for higher education development of information technology staff (HEDITS). With the implementation of managerial coaching, the dynamically changing IT work environment supports and builds continuous IT employment development. Increased employee development leads to increased productivity. The higher education development of information technology staff (HEDITS) Framework depicts and suggests a practical approach to promoting workplace learning by emphasizing the interrelationships and interdependencies between 'The Learner,' 'The Facilitator,' and 'The Institution' (Dawber, 2019). The study's findings indicated the need for a systematic approach to implementing employee learning and

development. The HEDITS lays the groundwork for managerial coaching. The proposed study's conceptual framework emphasizes managerial learning and technological training.

Small and medium-sized businesses struggle to remain competitive. A substantial body of literature supports the importance of small and medium-sized enterprises (SMEs) in emerging and mature economies. Nonetheless, the same study identifies various challenges that innovative firms in developing economies face, such as access to formal credit and external markets (Mallinguh, et al., 2020). This research project focuses on the acquisition of new technology and the sales performance of small and medium-sized businesses. The findings highlight two significant points. The points are a proportion of the capital budget that is allocated for the acquisition of technology that positively influences the SME's sales and, the owner-perception manager's reflects the attitude toward the relationship between capital budgets and technology acquisition and sales performance. The theoretical framework emphasizes the significance of managerial technology education and training.

Transition

Section 1 includes the foundation of the study, problem statement, purpose statement, nature of the study, the research question, interview questions, the conceptual framework of the study, definition of operational terms, the assumptions, limitations, and delimitations as well as contribution to the business practice, the implication for positive social change and literature review for the study. The foundation of the study presents the background of the study. The problem statement and purpose statement consist of the study's research problem and the purpose for researching the problem of ICT

inefficiencies. The contribution to the business practice and implication for positive social change consists of how the study can positively affect nonprofit organization's business operation and societal implications. The literature review identifies the need for ICT in nonprofit organizations to increase efficiency and effectiveness. Section 2 includes the project, purpose statement, role of the researcher, participants, research method and design, population and sampling, ethical research, data collection and analysis process, procedures and reliability and validity for a single case study.

Section 2: The Project

Section 2 includes the foundation of the study and results as well as interpretations. This section includes a summary of facts about the topic. Section 2 contains the study's purpose statement, the role of the researcher, participants, research method and design section, population and sampling section, ethical research, data collection instruments, data collection technique, data analysis, reliability and validity, and a summary of the study.

Purpose Statement

The purpose of this qualitative single case study to explore strategies used by nonprofit leaders to incorporate ICT into business operations to improve nonprofit organizational efficiencies and effectiveness. The target population of this single case study was organizational leaders of a nonprofit organization in a southern suburb of Chicago, Illinois who have successfully used strategies to incorporate ICT into business operations to improve organizational efficiencies and effectiveness. Study results may contribute to organizational efficiencies via adopting ICT by allowing for increased services to communities.

Role of the Researcher

I was the primary researcher for this qualitative case study. Qualitative research involves collecting, analyzing, and interpreting narrative and visual data to gain insights into a particular phenomenon of interest (Bloomberg & Volpe, 2019). The qualitative researcher is the data collector, analyst, and data interpreter who creates study conclusions and recommendations. Qualitative researchers must be good listeners,

adaptable, have knowledge of the subject matter, and conduct research in an ethical manner (Yin, 2018)

For this study, I selected organization participants, developed interview questions, conducted interviews, and observed business operations. I have over 25 years of IT work experience, having held computer programmer, programmer analyst, software developer, and IT consultant positions. I am currently an MIS/CIS full-time instructor and an adjunct instructor for an accredited university. I have taught undergraduates and graduate students. While fulfilling the role of adjunct instructor, I was allowed to teach graduate masters in public administration (MPA) students computer skills and the importance of technology in nonprofit organizations. I developed an interest in how nonprofit organizations use technology. This study allowed me to explore how nonprofit organizations incorporate technology into their business operations. I am the primary research instrument for data collection in this study. My lack of involvement with the nonprofit organization reduces the bias of the study.

Participants

I selected nonprofit organization and managers who met research criteria for the study. Participants in this study were organizational leaders of a nonprofit organization in the south suburb of Chicago. The participants of the study have successfully used a strategy to incorporate ICT into business operations to improve organizational efficiencies and effectiveness. An email was drafted and forwarded to management of nonprofit organizations in the Chicagoland area who met the requirement of the study (see Appendix A). Participants implemented a computer system for their business

operations. After gaining informed consent, participants were informed of the nature of the case study. When each participant agreed to participate in the study, I provided them with a written summary of the study and the informed consent form in order to understand the study's ethical implications, participant rights, and researcher responsibilities. Participants' privacy and confidentiality was protected, and results of their participation were not shared.

The Institutional Review Board (IRB) review involves protection of human subjects or participants of the study. IRB implement guidelines that ensuring that an informed consent is obtained in human study research. After receiving IRB approval for the study, I forwarded emails to solicit participants. IRB guidelines and standards were adhered to throughout the study. The IRB approval number is 02-16-22-0521771.

Research Method and Design

I used a qualitative single case study design to explore nonprofit leader strategies to incorporate ICT into business operations to improve nonprofit organizational efficiencies and effectiveness. I shared results of the case study with nonprofit leaders. Knowledge gained from the case study experience created a framework for increasing effectiveness and efficiency of business operations of nonprofit organizations.

Research Method

Three research methods were considered for this study. The research methods are qualitative, quantitative, and mixed methods. I chose the qualitative method because it allows the researcher to explore participant experiences (Marshall & Rossman, 2016).

Qualitative research is based on study of participants with an interpretive approach to their environments. Qualitative research relies on social interactions (Saunders et al., 2016). The qualitative research methodology requires the researcher to be interpretive, emergent, and evolving rather than tightly prefigured (Marshall & Rossman, 2016). Participants' knowledge and experiences are essential in terms of gaining insight about use of ICT to increase effectiveness and efficiency.

Quantitative research is characterized by deductive approaches to the research process aimed at proving, disproving, or lending credence to existing theories. Quantitative research involves measuring and testing relationships between variables in order to reveal patterns, correlations, and casual relationships (Leavy, 2017). The quantitative methodology was not suitable for this study because this study's purpose requires using an interpretive approach for interview data and not examining variable characteristics, correlations, or differences.

Mixed methods research involves collecting, analyzing, and integrating both qualitative and quantitative methods in a single project (Leavy, 2017). The mixed methodology was not appropriate as the study did not have a quantitative component. In this study, I was not testing a hypothesis nor seeking to understand the relationship between independent and dependent variables; therefore, the quantitative method was not appropriate for this study.

Research Design

The case study design was used in this study. A case study is primarily a social science research methodology used to investigate a phenomenon in depth in its real-world

context (Yin, 2018). A case study is appropriate because it allows the researcher to focus on a specific circumstance and retain a holistic and real-world perspective (Yin, 2018). The case in case study research may refer to a person, group, organization, association, change process, or event (Saunders et al., 2016).

Ethnography was another design considered for this research. The ethnographic design features an analysis of interactions within culture groups (Marshall & Rossman, 2016). Ethnography design is one of inquiry coming from anthropology and qualitative sociology where ethnographies seek to understand the culture of human groups and how they maintain their culture (Marshall & Rossman, 2016). Due to time constraints and the need for observations, this option is not appropriate. Since the proposed study focuses on individual experiences that could affect multiple people; therefore, ethnography research design is not appropriate for this study.

Narrative research design focus on how individuals assign meaning to their experiences through stories they tell. Narrative interlinked between an individual and her or his social and cultural context (Bloomberg & Volpe, 2019). Narrative is related to life history. This method assumes that people construct their reality through their stories. The researcher explores a participant's story and record the story (Marshall & Rossman, 2016). Narrative research design is based upon an individual reflective of another individual's life, therefore, narrative research design is not appropriate for this study.

Phenomenology is another design I considered for this study. Phenomenology may be conceived as a philosophy and a method. Phenomenology research designs is to investigate the meaning of the lived experience of people to identify the core essence of

human experience or phenomena (Bloomberg & Volpe, 2019). Phenomenological studies seek the meaning behind the lived experiences of the participants. I explored the participant's lived experiences; with a focus on the meaning but rather the processes utilized by the participants. In phenomenological studies, learning about the shared experience can come from interviews, but not documents (Marshall & Rossman, 2016). I reviewed and utilized organizational documentation as part of this study; the internal documentation review conflicts with Marshall and Rossman. Phenomenology research design was not appropriate for this study because the focus was on a business case, not the personal meanings of the participants' lived experience.

. There are two types of data saturation; one occurs during the interview process and the other through the coding process. Data saturation occurs when the collection of qualitative data provides little or no new information (Saunders et al., 2016). I will collect data until there are no new data points covered. The second form of data saturation occurs when no new information emerges during the coding process (Fusch & Ness, 2015). I will reach data saturation during the coding process when I cannot code any new themes.

Population and Sampling

The purpose of the population and sampling section is to allow the researcher to achieve the study objective and obtain quality and valid results. The selected population of this study was a nonprofit organization located in the Chicagoland area. Purposeful sampling, defined by Patton (2002), can be described as selecting a case that one can learn about the central focus to the purpose of the inquiry. Studying cases can yield insights and in-depth understanding rather than empirical generalizations (Patton, 2002).

A purposeful sample allows the researcher to identify participants who have specific insight and offer a unique perspective, often based on personal experience (Palinkas et al., 2015).

The participants in this study were the President/ VP, Director(s), and nonprofit organization manager(s). The participants were selected based on their knowledge of the business operations and knowledge to respond to the study's research questions. Data provided by the participants will allow the researcher to gather information needed for the study. The data collection instrument used in the study was semi-structure interviews. The use of interviews is used to gather valid and reliable data that coincides with the study's research question(s) (Saunders et al., 2016). Interviews was conducted at the convenience of the participant. A recorder was used to record the participant's responses.

Ethical Research

Ethical research is required to ensure the researcher adheres to the university standards. Ethics practice concerns will arise when planning the research of the study. Ethics becomes a topic when a researcher requests access to an organization's data for analysis and reporting (Saunders et al., 2016). Yin (2018) states that avoiding bias is an important facet of research ethics. I seeked permission of Walden's IRB to conduct a single case study. When IRB approval is granted to conduct the single case study, I will abide by the Office of Research Ethics and Compliance, the Institutional Review Board of Ethical standards in Research, and Walden's IRB ethical standard practices. In order to meet the requirements of Walden University, all research participants signed an informed consent before any data collection occurred.

An email (Appendix A) was sent requesting participation along with an informed consent form (Appendix C). The informed consent form identifies the nature of the study, the purpose of the study, responsibility of the researcher for ensuring confidentiality, existence of an audio recording device for documentation and formally solicit their volunteerism in participating in the study. The informed consent participant's disclosure agreement states participations in the study is voluntary with no incentives or compensation. Participant was informed that they have the right to withdraw from the study at any time. A participant that is withdrawing from the study was asked to email the researcher of the decision to withdraw from the study.

The researcher was responsible for inhering to the ethical standards and principles and informed consent. The researcher has the ethical duty of confidentiality of protecting participant rights and privacy, information from unauthorized access, use disclose, modification, loss or theft (Bloomberg & Volpe, 2019). Transparency is key to building creditability(believability), dependability (consistency), confirmability (ability to corroborate), and transferability(applicability) into your methodology (Bloomberg & Volpe, 2019). Transparency between researcher and participants is essential for the success of the study.

Respecting the privacy of research participants is at the heart of the conduct of ethical research. Researchers attempts to ensure the privacy of research participants by collecting anonymous information and ensuring that the information collected is kept confidential (Bloomberg & Volpe, 2019). Ensuring anonymity means no identifying information of the participants will be included and no linking of individual responses

with participants' identities (Bloomberg & Volpe, 2019). To ensure confidentiality, discretion and anonymity, pseudonym's name was used to identify participants. Electronic executed Informed Consent Forms, recorded interviews, and the researcher's interpretation of data will be stored in a safe and on a personal password-protected external hard drive for a minimum of five years, ensuring the rights of the participants and that their identity remain confidential. After a period of 5 years, the informed consent forms, recorded interview data will be destroyed.

Data Collection Instruments

In this proposed study, I was the data collection instrument. The data collection steps include setting boundaries and collecting information through semi-structured interviews and observations (Yin, 2018). In this case study, semi-structured interviews will be used to explore the strategies of the CEO, Director, and Managers use to implement ICT systems in nonprofit organizations. The primary data collection method was participant interviews. The interview questions included open-ended questions to allow the research participants to expand on their insights and perspectives (Appendix B).

The secondary data collection method that was used is direct observation. Such observation served as another source of evidence in doing case study research (Morgan, et.al, 2016). Observation is a central and fundamental method in qualitative inquiry and used to discover and explain complex interactions in natural social setting (Bloomberg & Volpe, 2019).

The third form of data collection was the analysis of documents in the business operation process. Yin (2018) indicates that records in paper or electronic form is

relevant. However, for a case study, research documentation is used to corroborate and augment evidence from other sources (Saunders et al., 2015). Records stored in public, private or nonprofit organizations' database as part of their day-to-day business operations are another form of documentation that is considered secondary data (Saunders et al., 2015). The advantage of secondary data is the saving of resources. The collection of documents is less expensive and time consuming than the researcher collection the data themselves (Saunders et al., 2015).

Member checking is important in the reliability component of the study (Marshall & Rossman, 2016). Following the interview of the organization's CEO, the Director and the manager(s), I will provide each participant with a detailed summary of the interview to allow each participant to validate the data collected in the interview and to prevent bias. Through member checking, Daniel (2018) argued that the researcher stands a chance of achieving rigor or thoroughness in case studies. As Daniel noted, member checking presents an opportunity through which the researcher can verify the level of accuracy in a participant's response.

The researcher must adhere to the availability of the interviewees' (Yin, 2018). A researcher can get different answers and interactions during an interview session if they ask different participants the same interview questions (Cataldi, 2018). I scheduled the interview(s) at a time that was convenient for each participant. Interview protocols was used by the researcher to ensure the validity and reliability of the data collection (Yin, 2018).

Data Collection Technique

The methods of data collection that was used in this study were interviews, direct observation and organizational documents. One of the most important sources is case study evidence is the interview (Yin, 2018). Interviews can especially help by suggesting explanations (i.e., the “hows” and “whys”) of key events and the participant’s perspectives (Yin, 2018). The primary data collection occurred via interviews using open-ended questions. The formal presentation of interview questions occurred during face-to-face interviews at the participant(s) location. Interviews lasted about 45-60 minutes and was recorded. The secondary data collection used was direct observation. Using observation as a method of data collection allows the observing of individuals and the interaction between the informants (Saunders et al, 2016).

The advantage of semi-structure interview is that it allows the interviewer to concentrate on questioning, listening direct quotes and accurately recorded (Saunders, et al,2016). Semi-structured interviews include the flexibility of using follow up and supporting questions in the data collection process. The disadvantage of semi-structure interview is participant’s responses may be bias or interview bias may be observed by the researcher. Response bias can be linked to perception of the interviewee. Interview bias occurs where non-verbal behavior create a bias to the way the interviewee responds to the question (Saunders, et al,2016).

The advantage of observation is the capability of observing the frequency of events. Relationships of events can be compared and recorded. The collection of data occurred in the natural setting that eliminated secondary interpretation. Observation

heightened researcher awareness of the social process. (Saunders, et al,2016). The disadvantage of observations is the impact or effectiveness of the behaviors, interactions or event may be inadequate to explore. The observation is limited to overt actions or surface indicators The observation can be time consuming and pose difficult ethical dilemmas (Saunders, et al,2016).

The advantage of using organization documents as a data collection instrument is it a saving of resources such as time and money (Vartanian, 2011) Reviewing organization document is less expensive and less time consuming to use secondary data source (Saunders, et al, 2016). The use of secondary data is data that has previously been collected and provide an unobtrusive measure (Saunders, et al, 2016). Secondary data can provide specific details to corroborate information from other sources (Yin, 2018).

The disadvantage of organization documents is the collection of data could differ from the research question(s) or objectives (Saunders, et al, 2016). Secondary data can be biases if collection is incomplete. Also, access to documents may be deliberately withheld (Yin, 2018).

In qualitative research interviews, the interview is audio-recorded and transcribed. Data transcription is the reproduced verbatim audio recorded research interview (Saunders, et al, 2016). The task of transcribing audio recording is time consuming, but it is important that the interviewer record exactly what was said.

Member checking is intended to validate the data collected by sending an interview summary to the participants to confirm accuracy of the data collected in the interview. Member Checking permits comments and corrections (Saunders, et al,2016).

Member checking can cause a problem if the participant would like to withdraw some data or alter the data. The researcher must differentiate between both cases. The alter of data may cause an ethical scenario (Saunders, et al,2016).

Data Organization Technique

The research question in this study was, what strategies do nonprofit leaders use to incorporate ICT into business operations to improve nonprofit organizational efficiencies and effectiveness? The data collection process consisted of interviews and direct observation. Data organization was initiated after the data collection process is completed. When beginning analysis, it is essential that the researcher spend time organizing the data (Marshall & Rossman (2016). During the interview, I will record each interview using an electric recorder while taking notes. The interviews were electronically transferred to my laptop. I transcribed each interview using transcription software. The electronic record file of the data collected was password-protected. The transcript of the interviews was stored in a secretly stored location and destroyed after 5 years. I observed each participant during the interview and took notes using a journal. My journal notes was compared to the responses to the interview questions.

A coding methodology was used to code the content of the interviews. I identified themes and patterns for the interviews by transcribing the recorded interview into a Microsoft word document. Data was uploaded into the software program called NVivo. NVivo is a qualitative data analysis software that will categorize the data collected (Yin, 2018).

The methods of data collection that was used are interviews, direct observations, and organizational documents. One of the most important sources is case study evidence is the interview (Yin, 2018). Interviews can especially help by suggesting explanations (i.e., the “hows” and “whys”) of key events and the participant’s perspectives (Yin, 2018). The primary data collection occurred via interviews using open-ended questions. The formal presentation of interview questions occurred during face-to-face interviews at the participant(s) location. Using observation as a data collection method allows the observing of individuals and the interaction between the informants (Saunders et al, 2016). The interview were face-to-face at the participant(s) location. Interviews were scheduled to last about 45-60 minutes and was recorded.

Data Analysis

Marshall & Rossman (2016) crafted a seven-step process of data analysis. The seven-step process consists of (1) organizing data, (2) immersion in data, (3) generating possible categories and themes, (4) coding data, (5) offering interpretation, (6) searching for alternative understand, and (7) presenting the study findings. I used NVivo to code the data collected. The software will not do the finished analysis independently, but it may serve as an able assistant and reliable tool (Yin, 2018). With the assistance of the NVivo software, I identified the patterns of code to form the themes in the study correlating the literature and my conceptual framework.

The coding process was intended to compare collected data and to categorize it. This process is to check for similarities and differences to promoter consistency to assist

in the analysis process (Saunders et al., 2016). As the researcher codes data in categories, relationships and patterns will result in an emergent theme (Saunders et al., 2016).

I used data triangulation to strengthen the validity of the case study. The multiple sources of evidence provide multiple measures of the same phenomenon (Yin, 2018). The data collection methods of semi-structured interviews, observation, and organizational documents was used. I compiled the results of the data collection of the study.

Triangulation of data was reached by conducting an analysis of the data collected during the semi structured, interviews, direct observation, and documentation analysis. Thus, emerging themes were evaluated to ensure the findings presented reliability and validity.

Reliability and Validity

Reliability

Qualitative research has been in question concerning reliability and validity. Reliability and validity are the most critical components for evaluating the research quality (Saunders et al., 2016). Reliability can be defined as the ability to replicate and to be consistent. If a researcher can replicate an earlier research design and obtain the same results, then the research would be viewed as reliable (Saunders et al., 2016). Member checking was used to establish the dependability in the study. The researchers use member checking by sharing the data and interpretation with the participants (Marshall & Rossman, 2016). Researchers request feedback from participants through the member checking process, which increases the reliability of the data collected and analyzed (Saunders, et al., 2016). Following the interviews, I shared a summary of the interview with each participant for member checking. The participants had the opportunity to

confirm or change the collected and analyzed data. I made changes based on the participant's suggestions.

Validity

Validity refers to the appropriateness of the measure used, the accuracy of the analysis of the results (Saunders et al, 2016). Validity is intended to validate the research data, analyst and interpretation to legitimize the authenticity (Saunders et al, 2016). Validity of a research study occurs when the measure that is being used to assess the phenomenon measures what the researcher intended to measure (Saunders et al, 2016). Researchers use data triangulation to verify if there is a convergence of information in their study (Yin, 2018). Yin (2018) believes that data triangulation assists in strengthening the construct validity of a case study. This case study used multiple sources of evidence as data triangulation. Fusch & Ness, (2015) believes that data saturation is reached when data triangulation is achieved. Data saturation and triangulation are critical to achieving reliability and validity (Fusch & Ness, 2015).

Creditability

Creditability is a process of ensuring accuracy (Yin, 2018). Creditability can be established by using member checking, data triangulation and data saturation to increase the creditability of the study (Yin,2018). In member checking, the researcher summarizes the interview and ask the participants for reactions, correction and further insight (Marshall & Rossman, 2016). Data triangulation is the process of collecting data through multiple sources. Data triangulation strengthens your study by combining methods and is a n important strategy for enhancing the quality of data from multiple sources, in multiple

ways, with the idea that this practice will afford an in-depth understanding (Bloomberg & Volpe, 2019). This study included interviews, observations, member checking, and data analysis. Data saturation occurs when the researcher notices a repetitive pattern and determines that no more can be gained from data collection (Marshall & Rossman, 2016).

Confirmability

The way qualitative researchers parallel the concept of objectivity is confirmability. Confirmability consists of whether the findings of the study could be confirmed by another individual or another study (Marshall & Rossman, 2016). In this study, a journal was used to ensure all information provided by the participants in the interviews and observation confirmed the actual data collected.

Transferability

Transferability are ways that the study's findings are useful to other researchers in a similar situation, similar research questions, or question of practice. The burden of demonstrating that a set of findings applies to another context rests more with another researcher who would make that transfer than with the original researcher (Marshall & Rossman, 2016). In my study, I documented interview questions, methods, designs, and techniques that researchers can use in future research.

Transition and Summary

In section 2, I included the role of the researcher, participants, research methods and design, population and sampling, data collection and techniques, data analysis, and reliability and validity. Section 3 will present the study's results and findings as well as recommendations for continue research of the subject matter of the study.

Section 3: Application to Professional Practice and Implications for Change

Section 3 includes findings, implications for social change, suggestions for participant action, future research, and reflections.

Introduction

The purpose of this qualitative single case study was to explore strategies that nonprofit leaders used to incorporate ICT into their business operations to improve organizational effectiveness and efficiency. Data were collected from the CEO/director, vice president, IT/project manager, and administrative assistant. Data collection tools were semi-structured interviews, direct observations of organizational operations, and organizational documents. Included in my study was an observation protocol (see Appendix D). The purpose of the observation protocol was to ensure consistency during the data collection process. Direct observation was conducted on consenting participants, during which I observed their roles in business operations. Consent forms included the purpose of the study, privacy measures, the voluntary nature of the study, and risks and benefits. Data collection shows benefits of incorporating technology into business operations and how this increases organizational efficiency and effectiveness.

Presentation of the Findings

This single case study was based on incorporation of ICT into business operations of a nonprofit organization. Participants are identified as P1, P2, P3, and P4. Data collection involved semi-structured interviews, direct observations, and organizational documents. NVivo was used to identify themes. Three themes resulted in the incorporation of ICT into the business operations of the nonprofit organization. The three

themes are: implementation and selection of software, employee adaptation and training, and process improvement and increased productivity.

Theme 1: Implementation and Selection of Software

The first theme to be revealed from the collected data was implementation and selection of software. A strategy to incorporate ICT into business operations to improve efficiency was to select software programs to computerize organizational processes. Implementation of software to replace manual operations will increase the efficiency of business operations.

P1 expressed the importance of the selection of computer software for the organization. P1 stated that as a paper-based operation, the organization needed to become a computer-based organization. P4 said software must fit the needs of the organization and be easy to use for staff. P4 said the organization needed to improve business operations through use of technology. P1 explained improvements in terms of organizational efficiency in processing records since the adoption of software. P4 expressed the desire for the organization to add more technology to organizational operations. P2 stated that converting computer-based processes was a challenge that the organization faced but after implementing customer relation management software, learning management system software and project management system software, the business processes improved.

The organization added customer relation management software to keep a record of potential and existing customer information. This information is used to collate customer status, program acceptance, and program completion. A learning management

system (LMS) was acquired to maintain educational material for each course. Instructors use the LMS to present course content, record lectures, administer tests, and maintain student grades. PMS software is used to monitor student educational material orders, acquisitions, and deliveries.

Theme 2: Employee Adaptation and Training

The second theme is employee adaptation and training. A strategy for incorporating ICT into business operations of the organization is to employ individuals who are computer literate and open to learning and being trained in technical fields. Employees of the organization were trained to use the CRS,LMS and PMS software that was adopted for business operations. P1 said software training and employees' success created a more efficient work environment. P3 stated lack of knowledge of software presented a challenge to staff.

Technology is an essential tool used in business operations. The conceptual framework in this study was the IT competency theory. The IT competency model was developed by the U.S. DOLETA and introduced in September 2012. Tysiac (2018) stated nonprofit organization's success depends on recruitment, retention, and training. Technological advancement requires advanced training of employees. Individuals who are not technologically trained will have limited or selective employment opportunities.

Theme 3: Process Improvement and Increased Productivity

The third theme presents the goals for incorporating ICT into the business operation of the organization. Process improvement increases productivity. The transition

from a paper-based system to a computer-based process resulted in the computer storage of records and a more efficient system for data processing and analysis.

Switzer (2017) discussed the topic of a nonprofit organization that has adopted a computer system and its development analysis process. Switzer (2017) stated that parts of an organization can work together on a set of technologies. This approach allows a nonprofit organization to implement strategic technological processes and make ongoing improvements to its business operation. The research question of this study is centered around the incorporation of ICT to improve business operations. Boles (2019) explained how the use of technology will increase the efficiency of nonprofit organizations and social workers' operations. The adoption of technology will improve the operational workflow of a nonprofit organization. Many organizations use innovation to become more efficient. Innovation is generally defined as the generation (development) or adoption (use) of new ideas, objects, or practices (Amabile, 1988; O'Toole, 1997; Rogers, 1995).

P4 stated that the acquisition of a computer-based system makes the organization more efficient P1 emphasizes the importance of improvement of the processes and increasing organizational productivity Bustinza, et al., (2019) believes that technology capabilities and resilience capabilities lead to organizational effectiveness. Technology capabilities allow for an organization to meet the challenges of the industry

Other Relevant Findings

The CEO/Director of the nonprofit understands the advantage that technology gives an organization. The CEO/Director, based on the data collected, coincides with the

IT competency model or the conceptual framework of the study. The IT competency model was developed by the U.S. Department of Labor, Employment and Training (DOLETA), and was introduced in September 2012. The purpose of the competency model, developed by McClelland (1973), Boyatzis (1982), Sandwith (1993), and Bassellier et al (2001), is to increase the manager's ability to adapt and understand new technologies.

The conceptual framework of this study is based on IT competency model. The U.S. Department of Labor, Employment and Training (DOLETA) developed the IT competency The conceptual framework supports the initial theme discovered in this research. The participants' response supports the managements' philosophy of technology and improved productivity. The IT competency model is to use technology to increase efficiency in the workplace environment.

The purpose of the competency model, developed by McClelland (1973), Boyatzis (1982), Sandwith (1993), and Bassellier et al. (2001), is to increase the manager's ability to understand and adapt to new technologies. The secondary theme employee adaptation and training supports the purpose of the competency model. This study's findings confirms the strategy of incorporating ICT into the business operation improves the nonprofit organization's efficiency.

Application to Professional Practice

The strategies of incorporating ICT into the business operations of a nonprofit organization to increase organizational efficiency and effectiveness were explored. Direct observation, semi-structured interviews, and organization documents were the data

collection tool that was used. The triangulating process was used to validate the data collection process. Thus, any case study finding, or conclusion is likely to be more convincing and accurate if it is based on several different sources of information (Yin, 2018). The data collection methods of semi-structured interviews, direct observation, and organizational documents were essential in responding to the research question of “The incorporation of ICT increase the efficiency of the business operations of the organization”.

Findings from this study coincided with peer-reviewed studies indicating the incorporation of ICT increases organizational efficiency and effectiveness. Organization efficiency in the business operation translates into decreased cost and increased resources that fund the organizational initiative. Nonprofit organization leaders are responsible for the leadership and the direction of the organization and its business operations. Business operation increase efficiency and the incorporation of technology increase productivity.

Bobsin, et al (2019) believes that incorporating technology will benefit the business operations of a nonprofit organization. Boles (2019) emphasizes that many nonprofit organizations use technology, but the increased knowledge and innovation would decrease cost and increase funding. The goal of a nonprofit organization must include decrease costs, increase efficiency and to increase funding.

Implications for Social Change

Nonprofit organizations are social change agents (Norris, 2019). Nonprofit organizations intend to assist society by striving to enrich people’s quality of life (Williams, et al, 2013). Nonprofit management objective has been focused on nonprofit

organizations accomplishing their missions and goals. Nonprofit management looks to assess the structures, systems, and growing inequality that shape our society at large and to equip nonprofit leaders with a more equal, humane, and power-sharing reality (Gray, 2020). The goal of an efficient technological environment is to provide better service more effectively. The adoption of technology can allow for increased services provided to the community. Positive social change implies that leaders of nonprofit organizations could use this study's findings to increase both the breadth and organizational effectiveness of services for needy citizens.

Recommendation for Action

This study is intended to explore the strategies of nonprofit leaders in the implication of ICT into the business operation of the organization. Based on the findings of this study, nonprofit organizational managers may consider incorporating ICT to improve. There are three recommendations nonprofit organization managers to consider, in improving the efficiency of the business operation of their nonprofit organization. The first recommendation would be to adopt and implement software that meets the requirements and needs of the organization. Software programs acquired by the organization must integrate with other software program. Software integration improved the business process and increases the organization's productivity.

The second recommendation is to acquire technology-oriented employees. The adoption of software in a work environment that is migrating from paper-based to technology will require technology training employees. Employees that accept and use

technology will adapt the change in the work environment. The success of a new business process adaptation includes user acceptance and technology integration.

The third recommendation is to analyze the results of the revised process to ensure the business process is providing proper results. The transformation from a paper-based system to a computer-based system should include parallel processing. The results of both systems must be compared for processing accuracy.

Recommendations for Further Research

The findings of this study require further research and exploration. The benefit of incorporating ICT into the organization's business operation will increase the organization's efficiency and allow for increased revenue for the organization initiative. I recommend the future researchers expand the research question to include specific software and or technology that will positively affect nonprofit organizations in accomplishing their mission. I recommend that future researchers expand the research question to investigate specific technologies that are specifically developed for nonprofit organizations. Additionally, the different strategies that nonprofit organization leaders used to incorporate technology into their organization should be explored.

Reflection on the DBA Journey

The journey of pursuing a Doctor of Business Administration at Walden University was a combination of experiences. I felt frustrated and was initially overwhelmed with the process. The journey was challenging and contains various obstacles that had to be surpassed. Each week, inspiring words kept me motivated to

continue to completion. The encouragement from my cohorts and classmate assist me through the tough times.

The journey is filled with gaining and sharing knowledge and experiences. The experience has come to completion only to lead me in a new direction with new experiences. Overall, I have enjoyed my journey at Walden University, and I am grateful to Dr. Ronald Black for his knowledge and expertise. This journey will forever be a significant period in my life that includes many emotions. I am no longer the same individual that began this journey and will forever be grateful for the experience.

Conclusion

The implementation of ICT into the business operation of a nonprofit organization can be successful if the CEO/Director or decision-makers understands the advantage of the adaptation of technology. Based on the IT competency model, manager technological knowledge is key in the adaptation of technology. The IT competency model is a conceptual framework that can help business managers obtain a better understanding of the concepts, assumptions, expectations, and theories related to increasing employee competencies in the workplace (Imenda, 2014). The increased employee competencies relate to the employee acceptance and training theme from the data analysis.

The findings of the study indicated that the technical knowledge and belief of nonprofit leadership is a prerequisite for the adoption and implementation of ICT into the business operation of the organization. The findings resulted in the success of the incorporation of ICT depending on employees' technological acceptance. The successful

implementation of the strategies of nonprofit leadership will results in an efficient and effective business operation of the organization.

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Appendix A: Email Invitation to Participate in the Study

Dear Potential Participants,

My name is Richard T. Evans, and I am a doctoral student at Walden University. I am inviting you to take part in a research interview concerning the technological adoption strategies for your nonprofit organization. The purpose of this research study is to explore the strategies of nonprofit leaders use to implement technology to improve their organizations' business operations.

I would like to conduct several interviews at your location at your convenience. The interview will last about 30-45 minutes. After all interviews, I will transcribe the content and request verification for accuracy. I will then request a meeting to verify the content of the interview.

I look forward to hearing from you in the near future. Your participation will be in this study will be most valuable to this study and very much appreciated. The name of your organization, and all interview participants will not be revealed. If you have any questions, please let me know. I will set up a phone conference to answer your questions or concerns.

Best regards,

Richard T. Evans MBA, MSMIS, MSCS, DBA candidate.

(Richard.Evans2@waldenu.edu)

Appendix B: Interview Questions

1. Describe the ICT that is used in your organization?
2. What key challenges have you faced in implementing the ICT incorporation strategies into your organization?
3. What strategies do you use to incorporate ICT into your business operations?
4. How did you address the key challenges to integrating ICT in your organization's business operations to improve organization efficiencies and effectiveness?
5. How did ICT technologies improve the duties and tasks of the staff of your organization?
6. How did ICT technology improve the services that are offered by the organization?
7. What additional information can you provide about the ICT strategies used to increase the efficiency and effectiveness of the business operations of your organization?

Appendix C: Informed Consent Form

You are invited to take part in a research study on strategies used by nonprofit leaders to incorporate ICT into business operations to improve nonprofit organizational efficiencies and effectiveness. This study is being conducted by a researcher named Richard Evans, who is a graduate student in the Doctor of Business Administration program at Walden University.

Study Purpose

The purpose of this study is to explore strategies used by nonprofit leaders to incorporate ICT into business operations to improve nonprofit organizational efficiencies and effectiveness. The results of this study may contribute to organizational efficiencies by the adoption of ICT allowing for increased services to the community.

Procedure

Step 1: You will participate in a face-to-face interview of approximately 45-60 minutes. The interview will be audio taped to ensure accuracy of the data collected.

Step 2: You will participate in a member checking interview of approximately 15-30 minutes to ensure your responses were accurately captured in the interview.

If you agree to be in this study, you will be asked:

- What key challenges have you faced in implementing the ICT incorporation strategies into your organization?
- What strategies do you use to incorporate ICT into your business operations?
- How did you address the key challenges to integrating ICT in your organization's business operations to improve organization efficiencies and effectiveness?

Voluntary Nature of the Study

Your participation in this study is voluntary. Everyone will respect your decision whether or not you choose to participate in this study. If you accept the invitation to participate, you can change your mind at any time during the study. No one at your organization will treat you differently if you decide not to participate in the study.

Risks and Benefits of Being in the Study:

Participating in this study will not pose any risk or adversely affect your safety.

The results of this study may be beneficial to your organization by providing insight into the strategies by promoting technology to improve the organization's business operation.

Payment:

There is no incentive for voluntarily participating in the study.

Privacy

Any information you provide will be kept confidential. As the researcher, I will not use your personal information for any purposes outside of the research project. The researcher will not include your name or anything else that could identify you in the study reports. The researcher will keep all data in a secure locked cabinet. Data will be kept for a period of at least 5 years, as required by the university, then shredded and destroyed completely.

Contacts and Questions

If you have questions, please contact me via email at

Richard.evans2@waldenu.edu or by phone at 708-254-9102. If you want to talk privately

about your rights as a participant or any other parts of the study, you can call Walden University's Research Participant Advocate at 612-312-1210. Walden University's approval number for this study is _____. It expires on _____.

Statement of Consent

I have read the above information and I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

Printed Name of Participant

Date of consent

Participant's Signature

Researcher's Signature

Appendix D: Observation Protocol

The purpose of direct observation in this single case study is to explore the incorporation of ICT strategy the nonprofit organization use to increase the organizational efficiency and effectiveness.

1. Before conducting the face-to-face semi-structured interviews, I will observe the daily tasks and business operation of the working staff for a period of 60 minutes.
2. During the direct observation, I will be looking for defined information:
 - a. How potential data is collected?
 - b. How the data collected is stored and become record in the organizational system?
What software is used to collect and maintain the data?
 - c. What is the data follow of new acquired records?
 - d. What are the systems that are a part of the business operation?
 - e. Are the systems integrated or are they separated systems?
 - f. How does the system work and what is your role?
3. Following each observation, I will produce a documented recollection of the direct. Observations.
4. Observations will be included in the data collection for analysis and coding.