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Exploring the Use of Texting within San Antonio Texas Police Emergency Reporting

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Abstract

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M.A.O.M, University of Phoenix, 2005

B.A., University of Texas at San Antonio, 1991

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The introduction of wireless device text messaging, as an alternative to a citizen placing a telephone call for police help, generates the need for new polices and processes relevant to police call-taker, police dispatcher, and police officer response to reported emergencies. Little scholarly research explores the policy issues around the use of text 9-1-1 within public safety answering point operations. Using systems theory as the foundation, the purpose of this qualitative case study was to explore the potential use of written communication via a wireless device text message for reporting a police emergency. Research questions focused on the reciprocal relationships in communication used to initiate an emergency call for service and police response. A maximum variation purposeful sampling technique was used to recruit 16 individuals with knowledge of placing, receiving, or responding to a police emergency request, for this study. Data collection methods also included police call-taker observations of four active 9-1-1 calls, 9-1-1 and police radio recordings of the calls, physical artifacts, and documentation. All data were inductively coded and then subjected to a thematic analysis procedure. Findings indicate that text messages may be a preferred option in certain types of situations, such as home invasions, where the victim may not be able to speak to call-takers as a matter of protecting personal safety. However, the use of text messages is also perceived as creating a potential for delayed police response due to the asynchronous nature of the process. Recommendations to police executives and policy makers include enhancing call-taker training and citizen instruction prior to the text messaging integration, thereby promoting positive social change through enhancing public safety by providing another mechanism for direct citizen-police communication.

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Dedication

I express my appreciation and dedicate my Ph.D. dissertation to my parents for showing continuous support during my educational pursuits; *if not for you, I would not be who I am*. To my daughters, Stephanie and Raquel, I wish you happiness and joy in life. To my grandchildren, Joshua, Jesus III, Briseis, Scarlet, and Sophia, live your life following your dreams and attaining your goals. May The Lord Bless You and Always Keep You Safe. As a first generation college graduate, this dissertation further serves as a tribute to my grandparents. *In Loving Memory* to my Grampo and Gramma Flores, Grandpa Villanueva, and still living Grandma Bolaños (age 104). With All My Love, Your Granddaughter, Your Daughter, Your Mom, Your Thaiya, and Your MeeMaw.

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Chapter 1: Introduction to the Study

Introduction

Police public safety response to emergency reports relies upon communication between the citizen reporting the emergency and police public safety personnel. Dialing 9-1-1 typifies the commonly used communicative mode used by people seeking police emergency response and assistance. The growing use of wireless device short-messaging service (SMS) or text messaging (Lam, 2012, p. 181; Thomee, Harenstam, & Hagberg, 2011, p. 1471) prompts the National Emergency Numbering Association (NENA) support efforts by Public Safety Answering Point (PSAP) management to plan and implement Interim SMS Text for 9-1-1 service (NENA, 2013, p. 1). Text-to-9-1-1 is the ability to send a text message to reach 9-1-1 emergency call takers from your mobile phone device (Federal Communications Commission [FCC], 2015, p. 1). The Next-Generation 9-1-1 (NG9-11) movement (Smith & Holmes, 2010, p. 18) advances data reception of wireless text messaging or SMS as a type of communicative mode for citizens to report emergencies. The wireless device text messaging advancement within San Antonio PSAP operations changes the current dynamic and identified PSAP processes. San Antonio PSAP operational procedures, pertinent to wireless device text messaging, do not currently exist. San Antonio PSAP management proposes to join other governmental jurisdictions including Black Hawk County, Iowa, the City of Durham, North Carolina, and Hamilton County, Ohio (FCC, 2014, p. 1), and incorporate wireless device text message communication into future operations. Current procedural operational processes require revision to include this wireless device text messaging use.

The technological advancement couples with societal changes in preferences for communication (Wilcoxen, Hesterman, Orcutt, & Hoppin, 2011, p. 469). Relevant use of wireless device text messaging for contacting emergency services personnel applies throughout the community affecting citizens' lives. The societal implications to engage potential users in the adoption of proposed PSAP changes empowers the citizens through their ability to choose the communication mode to use and generates the ability to report crimes through an additional means to elevate societal awareness through technological advancement.

Communication styles, processes, strategies, and practices (Cheng & Seeger, 2011, pp. 64-76, 69) actively managed in spoken conversation systematically differ from a text exchange form (Hutchby & Tanna, 2008, p. 161). Considered void in real-time and communication (Hart, 2010, p. 5), wireless device text messaging is asynchronous communication and in an emergency confused, inaccurate, unclear, or unsure understanding of the situation (Warner, 2010, p. 26) threatens police public safety response. How emergency reporting processes will change with the use of written text messaging in place of oral communication becomes the focus of ensuring police public safety response is not threatened.

Through a qualitative case study centered upon citizens', police call-takers', police dispatchers', and police officers' (i.e., stakeholders') perspectives, I explored how communication influenced an emergency request for service and how an emergency request influenced communication furthered understanding of text messaging use during police emergency reporting. The conceptual elements of police public safety, emergency

reporting, written language use, wireless text messaging, technological advancement, and change-management in addition to the systems theory theoretical framework shaped the research inquiry. Police public safety policies, processes, and procedures reach throughout society; therefore, learning how wireless device text messaging merges with police emergency reporting addresses police public safety policy concerning the protection of life and property.

Background

The 1967 President's Commission on Law Enforcement and Administration of Justice (United States) called for a single universal number for reporting police and fire emergencies (NENA, 2013, p. 1). Prior to the first use of 9-1-1in 1968, separate and independent phone numbers existed to contact the operator, police, or fire departments dependent upon on the emergency (NENA, 2013, p. 1). *9-1-1*, an easy number to remember, was adopted (Kroger, 2012, p. 1) and became the universally used nationwide number designated for fast and easy access in order to request emergency assistance (NENA, 2013, p. 1). In San Antonio, the participation in the 9-1-1 emergency services exists as an Interlocal Cooperation Agreement between the Bexar County 911 Network District and the local municipal government to provide quick response to any person seeking police, fire, medical, rescue, and other emergency services (see Appendix A).

In San Antonio's PSAP environment, when citizens dial 9-1-1, the police call-taker (see Figure 1) is responsible for guiding the caller in a modus operandi (U.S. Department of Transportation [USDOT], 2014, p. 1) intending upon accelerating and identifying the nature of the call. The caller hears "San Antonio 9-1-1; do you need

Police, Fire, or EMS?" The police call-taker requires a detailed communication of pertinent information surrounding the emergency request to coordinate response actions. Within a NG9-1-1 text messaging scenario, the police call-taker's greeting is absent as the beginning of a conversation and the citizen is now in the position of delivering, via the text message, important information as quickly as possible (FCC, 2015a, p. 1). The quicker an emergency request is processed, the sooner emergency help arrives. Each necessary back and forth communication between the call-maker and the call-taker delays needed police response coordination.

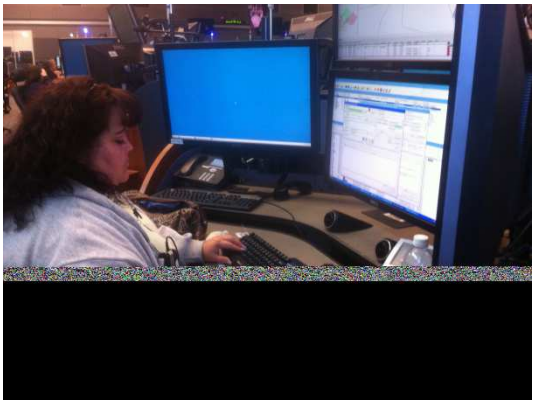

Figure 1. PSAP police call-taker

Wireless device texting as a social occurrence is convenient as a conduit of conveying information rapidly in real time; however, texting is impersonal and a non-rich sort of communication for telling a complete story or sharing a complete thought (Hart, 2010, p. 6). Available literature referenced SMS to commonly, though not exclusively, occur, between well-acquainted people and for flirting and dating, warning and assisting friends, making practical jokes, and coordinating discreetly (Tjora, 2011, p. 198). Text message elements such as word clipping, vowel deletion, word-letter substitution, word-

number substitution, spelling simplification, and pronoun deletion (Dabrowska, 2011, p. 7) along with other possible texting characteristics such as auto-correct can influence the text delivery and call processing. The gap in scholarly literature revealed a lack of discussion and debate surrounding the use of SMS or text messaging in a public safety emergency environment (Lam, 2012, p. 185). Recognizing the gap can be the difference between life and death emergency events, deterring delays caused by confusion, misunderstanding between the sender and receiver, and ensuring effective information exchange for prompt and competent response from a call-taker during 9-1-1 emergencies (Chandrasekaran et al., 2011, p. 733). My study bridged scholarly literature as well as identified the practical gap within the emergency response environment and provided findings beneficial to PSAP operations through discovery, recognition and appreciation of how communication via the wireless device text messaging feature understanding contributes to revisions of operational changes and policy development.

Statement of the Problem

Proposing written communication text messaging processes in an emergency reporting situation changes the current speech-delivery method citizens use to report police emergencies. San Antonio is following NENA's (2013) encouragement "to take action to bring SMS Text for 9-1-1 to provide texting to 9-1-1 capability to the residents who are deaf, hard of hearing, or have a speech disability, as well as others who need to use text in emergency situations" (p. 1). Communication styles, processes, strategies, and practices Cheng & Seeger, 2011, pp. 64-65, 69) actively managed in conversation systematically differs from communication existing in a text exchange form (Hutchby &

Tanna, 2008, p. 161). Incorporating the use of written language, via wireless device text messaging, as a means to exchange information where spoken language between the call-maker and the call-taker is commonly used influences the emergency reporting processes, procedures, and policies.

Incorporating the wireless device text-messaging feature within San Antonio NG9-1-1 emergency public safety reporting introduces a new and unused communicative process in emergency reporting requiring operational policy changes and a change-management process. Unidentified procedural processes addressing wireless device text messaging use in the San Antonio Police Department (SAPD) Communications Unit's PSAP Standard Operating Procedure (SOP) pose a problem. Exchanging critical information relative to the emergency report is crucial; therefore, ensuring a common set of concepts, principles, terminology, and technology in the emergency response (Hawkins, 2007, p. 3) is required for communication effectiveness. Available literature does not address how wireless device text messaging will transition into use in a technical and professional police public safety emergency reporting environment (Lam, 2012, p. 185). Because 9-1-1 emergency calls are distressful circumstances that include panic filled situations where people can react uncontrollably (Chandrasekaran, Dantu, & Subbu, 2011, p. 733), providing knowledge to fill and shrink the language use and communicative gap, in the proposed introduction of text messaging use, is imperative when public safety matters of life and death constitute risk.

Purpose

The purpose of this qualitative case study was to explore the potential use of written communication via a wireless device text message to report a police emergency through the perspectives of a population with direct knowledge of placing, receiving, acting, and responding to an Enhanced 9-1-1 (E9-1-1) emergency report, commonly referred to as *9-1-1*. 9-1-1 service is a vital part of our nation's emergency response and disaster preparedness system (FCC, 2015a, p. 1). Proficient communication between call-takers and callers to accumulate and understand the information and event meaning is essential (Carroll, Calhoun, Subido, Painter, & Meischke, 2013, p. 286). The communication change (i.e., written text messaging from oral conversation) involves changes in communication styles, processes, strategies, and practices (Cheng & Seeger, 2011, pp. 64-76).

The Wireless Communications and Public Safety Act of 1999 (9-1-1 Act) addressed, in part, reducing emergency response times as well providing appropriate care to citizens (FCC, 2015b, p. 2). The Act further stipulated that "emerging technologies can be a critical component of the end-to-end communications infrastructure connecting the public with emergency medical service providers and emergency dispatch providers, public safety, fire service and law enforcement officials, and hospital emergency and trauma care facilities" (U.S. Government Printing Office [USGPO], 1999, p. 1). As the technological infrastructure to support Internet Protocol (IP) based data networking necessary for the reception of SMS into the PSAP exists, the San Antonio PSAP management and leadership strive to develop, deploy, and adopt wireless device text-

based messaging for public use. The reason to acknowledge that the inclusion of the new communicative form changes the dynamic of an emergency request, processing time, and response time sustains the need to know how policy continuation is affected. The advantage to studying and learning the impact on policy of how wireless device text messaging use within emergency reporting changes San Antonio PSAP stakeholder processes helped to gain knowledge relevant to phenomena understanding.

Because Interim SMS-to-Text does not exist, in San Antonio, I studied current E9-1-1 calls and the communicative patterns in emergency reporting oral communication interaction between the call-makers and the call-takers to provide insight into the potential transition to written communication and wireless device text messaging use during NG9-1-1 emergency reporting. I conducted interviews and observations with the police call-takers directly involved in the emergency case studies. The San Antonio PSAP stakeholders' perspectives led to documented findings regarding communication exchange. Evidentiary materials such as archival documentation, telephone call recordings, and radio communication recordings served as study evidence to elaborate the significance of the purpose.

Internal construction of text messages as interactive artifacts (Hutchby & Tanna, 2008, p. 143) include communicating emotions and transmitting experiences (Liu & Gao, 2011, p. 119) and relying on meaning and signals (Zuidema & Verhagen, 2010, p. 55) between the sender and receiver when communication effectiveness plays a main role (Jorfi & Jorfi, 2012, p. 1). Learning how the written form of communication differs in characteristics from oral communication and the need to understand the changes prior to

the activation of the new communication method for reporting emergencies accentuated the purpose of exploring and creating a social awareness of the new emergency reporting text messaging process. The knowledge gained through the study supported the understanding of the wireless device text messaging process to ensure dispatching help to the emergency incident as quickly as possible and furthered needed PSAP operational procedural updates.

Research Questions and Subquestions

My qualitative study research questions queried the relational parallelism, intersection, congruency, or inferential construction by and between the conceptual ideas presented in this studied phenomenon. In order to elicit strong and rich data pertinent to the phenomenon, the central research and subquestion inquiries extended beyond a quantitative closed-natured investigative response. Discovery, descriptive, and explanatory leading words such as how, what, or why helped guide a qualitative inquiry (Stake, 1995, p. 3-4). The inquiring central research question steering the exploratory case study was how might the introduction of wireless device text messaging use within emergency reporting change San Antonio PSAP stakeholder processes? Additional research subquestions shaping the conceptual, purpose, problem statement, and methodological alignment in the study were:

1. How does communication influence an emergency request for service?
2. How does an emergency request for service influence communication?
3. What change is inspired when emergency requests initiate via a wireless device text message?

4. How can addressing change, based upon technologically enhanced communication, be coordinated in an effort to influence a successful transition to text message use for emergency reporting?

Theoretical and Conceptual Framework

The communications engaged in during an emergency epitomizes the circularity characteristic present within systems theory (Knudsen, 2010, p. 5). Systems theory further concerns the interrelations and nonlinearity of the collectable parts comprising a system accomplishing an overall goal (von Bertalanffy, 1969, p. 13). Emergency reporting is a system and the theory of acknowledging separate components through the recognition of the patterns of interactions and motions of one part affecting and contributing to the motion of another part as well as the whole (Knudsen, 2010, pp. 5-6) embodies the communication action and reaction present in requests for police emergency response. The concepts in this study's structured framework are connected and the relationships between the concepts are variables infused within this phenomenon being studied (Maxwell, 2005, pp. 52-53). The inclusion of the alternate communication mode in PSAP operations introduces written language use, wireless device text messaging, change-management, and technological advancement along with existing concepts of emergency reporting and police public safety. When considering a collaborative environment, the key factors affecting stakeholders subject to the phenomenon manifest through multiple perspectives to allow for an in-depth review of the subject.

The perceptions to offer the relative fusion by and between the conceptual variables sets out as an image beginning with the PSAP official acceptance of incoming emergency reports via the wireless device text messaging format. If the change-management process does not follow in a guided fashion, how will the citizens know what to do? The sender is now in the position to initiate the critical information to the call-taker whereas in a voice call the call-taker first collects critical information from the caller to assess the situation (Chandrasekaran et al., 2011, p. 734). If the basic initial contact by the sender via the text does not contain an adequate amount of information to assess the emergency, the repeated need to send and receive text messages will delay the processing of the report. Obstacles existing through the use of written language that create difficulty in arriving at an understanding of the shared meaning of words or ideas between individuals can hinder communicative efforts resulting in ineffective information exchange (Carroll et al., 2013, p. 286). Text messaging involves the use of abbreviated word forms for language economy (Dabroska, 2011, p. 7), so in addition to allowing for the common misspelling of words via text messaging, call-takers must also be cognizant of language economy use by senders. Technology advancement also introduces the need for new learned skill sets for users and highlights intervention opportunities for stakeholders (Carroll et al., 2013, p. 286). The primary thought for introducing a guided change is to ensure emergency reporting remains timely and police reach the emergency scene to assist citizens and minimize life-threatening encounters (USGPO, 1999, p. 1).

Deconstruction of the phenomenon conceptual framework into definitions of the various expressions affecting all stakeholders can enhance discussion of the worth of the research and elaborate as well as equate the phenomenal actions by and between participants (Ellis & Levy, 2008, p. 17). The SAPD communications office SOP provides processes and procedures as a policy of the traditional authority regulating the current oral communication mode between the call-maker and the call-taker through steady state models for procedural use (Gentile, Davis, & Rund, 2012, p. 404). The use of written wireless device text messaging alters the current oral conversational mode for the initiation of an emergency request for service and the change threatens the current steady state model (Deeg, 2009, p. 191). The change to a written mode for citizens to report emergencies is emergent, may not be smooth, has no clear established rules, may be challenging, may create discrepancies, and requires understanding in order to produce new and applicable procedures relative to wireless device text messaging use during the emergency reporting process (Rusly, Corner, & Sun, 2012, pp. 339-340). Studying the identified conceptual elements, in combination, provided the avenue to strategize, produce, and validate the success of a new steady state model (Christensen & Grace, 2010, p. 227; Deeg, 2009, p. 191). Gaining an understanding of the changes within the resources and actions inclusive in the new text messaging process created knowledge to each other's needs as well as an integrated and high-level of adaptation (Hadjikhani, Lindh, & Thileniou, 2012, p. 134). In Chapter 2, I explore and present the frameworks more thoroughly.

Nature of the Study

The nature of the study was to investigate and explore, through a qualitative case study, the shared communications between San Antonio PSAP stakeholders to advance preparation and transition to wireless device text message written communication initiation of a police emergency request. The study participants' perspectives, based upon their experience of the 9-1-1 call reporting process and first-hand knowledge of the shared communication throughout the emergency response, informed the research questions in terms of being equipped for the transitional change and policy refinement. Gaining further knowledge through the analyses of E9-1-1 cases produced references pertinent and valuable to policymakers. The ultimate result was to bridge the practical gap resulting from the lack of operating policies and procedures surrounding the use of wireless device text messaging for reporting police emergencies through strategy and improve outcomes through plans of actions.

The academic and practical information that existed to research how the introduction of wireless device text messaging use within emergency reporting will change PSAP stakeholder's processes lied in the situation dependent and context sensitive (Bennet & Bennet, 2007, p. 27) knowledge available not just through literature but from those individuals currently intimate and involved in the emergency reporting process. Literary knowledge to apply to an unfamiliar situation and that I collected on the topic included concepts relative to language use, written communication, text messaging, change-management, technology, and police public safety reporting. San Antonio PSAP operational procedures and processes of current E9-1-1 reported emergencies added to

the knowledge available. Obtaining direct information and knowledge from individuals who have placed an E9-1-1 emergency report as well as police department employees responsible for actions addressing an emergency report provided me with the perceptions to conduct a qualitative, rich, and in-depth research study. Through a variety of design decisions (Hays & Wood, 2011, p. 288), a qualitative case study inquiry and investigation steered the data collection methods and methodology regarding the study participants' real life perspectives surrounding the E9-1-1 emergency call. Using the case study, the most challenging of all social science endeavors (Yin, 2014, p. 3), generated qualitative findings relevant to purposive and working part elements (Stake, 2010, p. 2) substantial to the proposed introduction and use of text messaging within NG9-1-1 services. The case study design is dynamic and operates in real time (Stake, 2010, p. 3), factors that made it the most appropriate design for this study.

By employing multiple data-gathering techniques, holistic and real-world perspectives ensue (Yin, 2014, p. 4) reflecting the complex, situational, and problematic relationships (Stake, 2013, p. 10). My field observations clarified the picture of what was going on (Stake, 2010, p. 89). Direct observation of the persons involved in the event (Yin, 2014, p. 12) placed a responsibility on me "to know what is happening, to see it, to hear it, to try to make sense of it" (Stake, 2010, p. 95). My conducted interviews of the persons involved in the events (Yin, 2014, p. 12) aimed to obtain unique information held by the person experiencing the activity of the phenomenon as it occurred in context and in the particular situation (Stake, 2010, pp. 2, 90). Face-to-face interviews, between the study participants and me, strived to be conversational with the interviewer asking

probing questions to clarify and refine the gathered information (Stake, 2010, p. 96). The intent of the interview was recreating past 9-1-1 relative perceptions as realistically as possible to obtain thick data findings for categorical theme classification (Stake, 2013, p. 89). By investigating and following the progression of the emergency call through observations and interviews of police call-takers, police dispatchers, and police officers, the evidence resulting from the findings in addition to documentation, physical artifacts, and recordings merged to substantiate and support the style of the inquiry (Stake, 2010, p. 89). Citizens' interviews provided user perspectives to the proposed NG9-1-1 text messaging option. Exposing the reading audience to academic and real-life evidence to engage preparation and consideration of the planning, organizing, sharing, and collaborating of resources is the forethought to the impending change. The study participant's expertise in the commonly shared phenomenon provided credible findings instrumental to areas of change-management. The study generated scholarly findings by bridging existing knowledge relative to the use of wireless device text messaging and applying that knowledge in the context of police public safety emergency reporting thereby increasing literature that currently does not exist on the topic.

Leadership Initiative

NENA's encouragement to promote SMS Text-to-9-1-1 as a part of NG9-1-1 system enhancements (NENA, 2013, p. 1) provides the opportunity for PSAP leadership to plan and promote the proposed communication method change. Vision-based advocacy, practice-based learning, political engagement, and scientific management are four models for affecting change (Mattson, Clark, Byrd, Brown, & Robinson, 2011, p.

103) that public policy leader responsible for shaping and informing policy recommendations (Kos, 2010, p. 97) can incorporate into an approach towards problem-solving, decision-making, and strategic planning (Mattson et al., 2011, p. 111). The failure or success of the incorporation of wireless device text messaging in police emergency reporting strategically aligns with guided change-management initiative (Sormunen & Eskelinen, 2013, p. 83).

Leaders can advance changes in policy through initiative. When policy guidelines and processes impact citizens' lives and safety, as in the advancement to a text-based 9-1-1 initiated request, leaders obtaining stakeholder's perspectives to effect evidence-based policy should be a major factor influencing policy developments (Macdonald & Atkinson, 2011, p. 463). The inclusion of private citizens', police call-takers', police dispatchers', and police officers' perspectives to gather evidence-based knowledge advancing policy change generates transparency throughout the change, stakeholder buy-in, and fosters a win-win solution. Creating a sound business package to initiate change by addressing shortfalls in intelligence and using appraisal activities (Mattson et al., 2011, p. 111) for a realistic assessments (Solomon, Akintayo, & Akinsiku, 2012, p. 212) engages communication, collaboration, and cooperation skills and talents through leadership initiative.

Preparations supporting change-management initiatives, inclusive of preemptive actions, leads to leadership abilities of identifying and determining capabilities relative to functions specific to wireless device text messaging (Milushev, 2009, p. 17) to minimize the existence of or anticipation of disadvantageous effects from the business activity

(Hidayati, 2011, p. 105). Tabletop training exercises involving those directly engaged in the emergency request processes (Pearson, 2011, p. 31) can encourage communication exchange through role-playing, simulation, visualization, and analogy and contribute to conceptual change reasoning through mental modeling (Nersessian, 2010, p. 11). Leadership does not exclusively mean leading; confidence in one's leadership abilities is recognizing that at times learning through and following others is equally effective and rewarding.

Public policy exists in complex interdependent political environments where learning, belief, and policy change influence decision-making strategies (Weible, Sabatier, & McQueen, 2009, p. 121). Change does not exist in a vacuum; therefore, citizens should advocate for participation in policy-building initiatives relative to societal happenings. The Institutional Analysis and Development (IAD) Framework highlights the conception, development, and maturation of institutions, as well as the continuous evolution influencing the resulting human interaction (Sabatier & Weible, 2014, p. 11). Historically, the inception and evolution of the current-day E9-1-1 reporting system resulted from a process progressing by the need to shape a necessity within society. The infancy of wireless device text messaging for emergency reporting, as the initial contact between the citizen and police call-taker, concerns the evolution to NG9-1-1. A bottom-up fashion to inform policy prospers from front-end user's perspectives (i.e., PSAP operational personnel and citizens) as a means to include and learn from those taking action and producing results (Jagoda, Lonseth, & Lonseth, 2013, p. 389) in the form of an

innovation and diffusion model steering the evolution process to policy adoption (Sabatier & Weible, 2014, p. 14).

Involving front-end user stakeholders in the policy evolution to encompass NG9-1-1 operational policy creates the ultimate benefit and likely produces the positive influence of the initiative's sustainability based upon the stakeholder's sense of empowerment by collaboration during the development and implementation process (Anonymous & Pan Canadian Consortium for School Health, 2010, p. S21). The innovative bottom-up style to implementation directly opposes the top-down style where management's "implemented focuses are too broad and are based on management levels and up" (Jagoda et al., 2013, p. 389). The IAD Framework policy theory addresses "the actual rules-in-use that structure the day-to-day behaviors of actors engaged in situations in a policy process (Sabatier & Weible, 2014, p. 14) and as such the alignment of the bottom-up style and end-user focus alignment applies to the emergency reporting procedure. Citizens should actively advocate being included in such a widespread and safety-based change event. The evolutionary process of policy is further applicable based upon public policy subjectivity to periodic review and amendment as well as the progression of current E9-1-1 practices to NG9-1-1.

Definition of Terms

Automatic Number Identification (ANI)/Automatic Location Information (ALI): In order to identify incoming calls, ANI and ALI display at the call-taker position (Jasso, Hodgkiss, Baru, Fountain, Reich, & Warner, 2009, p. 266).

Broadband technologies: Includes video along with voice and data communications for shared data sharing. Through dedicated spectrum, broadband technologies will support innovative technological solutions to enhance public safety communications (Wong, 2011, p. 1).

Cognitive intelligence: Using individual abilities occurring in the neo-cortex (brain) consisting of logic, reason, reading, writing, analyzing, and prioritizing (Ebert & Crippen, 2010, p. 371).

Computer Aided Dispatch (CAD): Computer Aided Dispatch relies on web-based software for interoperability between the dispatcher and first responder in the field. Real-time management of field-activity, using CAD, creates, tracks, and updates incident details by managing multiple resources to assist in the command and situational control (TriTech Software Systems, 2013, pp. 1-2).

Critical theory: A philosophical point of view based upon humanities and social sciences emphasizing a critique through explanatory, practical, and normative appraisal of culture and society (Wellmer, 2014, p. 706).

Emergency Services IP network (ESInet): An IP based system designed as a managed network with shared applications replicating features and functions in emergency services offering interoperability; E9-1-1 circuit switched technology, IP networks, and NG9-1-1(Berryman, 2010, p. 22).

Enhanced 9-1-1or E9-1-1: Regulations that require carriers to provide the PSAP with the telephone number of the originator of a wireless 911 call and the location of the

cell site or base station transmitting the call improving effectiveness and reliability of wireless 911 services (FCC, 2016, p. 1).

Excogitation: Studying information intently and carefully to grasp or comprehend the information fully (Spinellis, 2009, p. 115).

Information and communication technology (ICT): Technologies that provide access to information through telecommunication focused on Internet, wireless networks, cell phones, and other communications (Masrom, Ismail, Anuar, Hussein, & Mohamed, 2011, p. 370).

Internet protocol (IP): A communication method using IP addresses where networked computers transmit and receive data in packets (Berryman, 2010, p. 22).

Language economy: Language adaptation use to avoid wordiness and redundancy in order to minimize text (Dabroska, 2011, p. 7).

Message stream: Reception of text message "batches" as a continuous message though the text batches are managed in separated packets (Huang, Zhou, Quanyuan, Wang, & Jia, 2011, p. 452).

Modus operandi: The method used to perform the task (USDOT, 2014, p. 1).

New public management (NPM) reform: A management and global philosophy that calls for deliberate public sector organization changes to structures procedures by embracing practices and techniques used in the private sector (Christensen & Laegreid, 2007, p. 3).

Next-Generation 9-1-1 (NG9-1-1): Next Generation 9-1-1 is a drive to improve emergency communications by updating the 9-1-1 telecommunications infrastructure.

NG9-1-1 protocols include IP-enabled systems, local Geographical Information System (GIS), and managed technical support (Smith & Holmes, 2010, p. 154).

Organizational theory: An interdisciplinary focus on how patterns, structures, and outcomes develop and sustain within organizations provides insight into how to address problems, efficiency, and productivity as well as how to meet expectations and goals. By studying how capacities use, combine, and create to define the organizational environment, the understanding of the existing relationships are used to modify, alter, and change structures, patterns, and behaviors within organizations (Weiner, 2009, pp. 2-3).

Police communications call-taker: The PSAP employee responsible for answering 9-1-1 emergency calls to assist citizens to obtain emergency services (COSA, 2013a, p. 1).

Police communications dispatcher: The PSAP employee responsible for performing technical and administrative radio communications that involves the deploying of police personnel according to the request for services (COSA, 2013b, p. 1).

Public Safety Answering Point (PSAP): Besides being a concept, the PSAP is a building where call-takers, dispatchers, and communications administrative personnel are physically located and commonly referred to as a 9-1-1 call center (Caglio & Ditillo, 2012, p. 61).

Short messaging service (SMS): Commonly referred to as texting or text messaging requires the use of a numerical pad on cellular phones or keyboards on smart phones or computers to share written communication between the users of the devices.

The communication transmits from the initiating device to cell phone tower control channel to the receiving device (Balakrishnan & Loo, 2012, p. 364).

Standard operating procedure (SOP): Established processes intended to address business processes approved through the chain-of-command and conform to the organizational principles and deliverables (Sun, Cretacci, Wu, & Cheng, 2009, p. 759).

Systems theory: Originally proposed by biologist Ludwig von Bertalanffy in 1928, the theory characterizes circularity and concerns the interrelations and nonlinearity of the collectable parts comprising a system accomplishing an overall goal. Systems theory recognizes separate components through the recognition of the patterns of interactions and motions of one part affecting and contributing to the motion of another part as well as the whole (Knudsen, 2010, pp. 5-6).

Theory of communicative action (TCA): The theoretical reflection that language speech acts foster reaching understandings. It is through the communicative action that validity claims lead to agreement (Habermas, 1984, p. 25).

Tri-Tech Powerline: TriTech is a Software Systems company, providing public safety streamlined solutions; Powerline is a multi-tier architecture systems component using Intellisense and interfacing with call taking and dispatch functions for real-time recording of voice-related communications (TriTech Software Systems, 2013, pp. 1-2).

Telephone typewriter, teletypewriter, or text phone (TTY)/telecommunications device for the deaf (TDD): A telecommunication system enabling deaf, mute, and hard-of-hearing individuals to use written communication to converse via telephony equipment (Tech-FAQ, 2016, p. 1).

Word-smithing: Assessing the author's works for accuracy and making changes to works to improve clarity (Warner, 2010, p. 29).

Assumptions and Limitations

An assumption or assumptions must be present as supposition for the researched phenomenon to exist (Carnaghan, 2013, p. 1). Acknowledging the event of citizens engaging in an exchange of information with 9-1-1 call-takers based upon an expectation of service in the form of assistance by emergency responders (Gruber & Frugone, 2011, p. 493) is a necessary assumption in this study; therefore, a legitimate belief of the 9-1-1 emergency reporting process must exist. The prediction that in-depth evidence-based qualitative indicators reflective in the voice-initiated emergency reporting, as well as the ensuing reciprocating communication by the receiver, are projected to support a transference of pattern development similarly integrative into written communicative practices applicable to wireless device text messaged emergency reports (Kaae, Sandergaard, Haugbolle, & Traulsen, 2009, p. 36) was presumed. An assumption that interdependent relationships exist among the variables in this study's contextual framework was must be presumed.

Limitations, in research, included restrictive constraints imposing boundaries in this study. The calls selected for data collection and analyses were limited to English language use. While the San Antonio race population, in 2014, was 54.87% Hispanic (San Antonio Economic Development Foundation [SAEDF], 2014, p. 3), the assumption was that the San Antonio Hispanic community does not strictly speak Spanish. As per the SAEDF (2014, p. 4) 3.33% of the San Antonio Hispanic community does not speak

English-language; therefore, the exclusion of Spanish language users did not affect the study's internal validity or reliability. Because the proposed introduction of the wireless device text message format for emergency reporting in San Antonio will not entail the use of Spanish language, the inclusion of Spanish language would not be more influential (Moreno, Reisslein, & Ozogul, 2009, p. 83). COSA's interpretation service contract excludes written language interpretation services for the emergency reporting process and further limits the inclusion of Spanish language in this study. Though the use of written language in the form of TTY/TDD exists in the hard-of-hearing community, the extent and knowledge police call-takers may possess regarding the use of TTY/TDD will not enter into the study. Citizen and police call-taker voluntary study participation limitation included wireless device user experience. In today's social community, the assumption that working adults are knowledgeable and experienced with text messaging use is realistic (Smith, A., 2011, p. 1). Citizen voluntary participants must possess personal experience in placing an E9-1-1 call into the SAPD PSAP. A final study limitation included only approaching SAPD PSAP employees with more than 6 months of SAPD PSAP experience as potential study participants. The reasoning for this action was to ensure work inexperience does enter into the complexity of the PSAP processes as well as to ensure the integrity of the data collection if the PSAP employee did not successfully complete the employment probationary period prior to the completion of the data collection phase.

Scope and Delimitations

The facets of a qualitative exploratory research are inductive (i.e., revolving around instinct and cognitive adaption; Eibl, 2009, p. 44) and open to discovery; therefore, in order to see clearly the preliminary extent of the study the scope must define how and why the study is important along with for whom the study is important. Knowledge of the use of written communication, specifically wireless device texting, for the case of emergency reporting in addition to the differential considerations between oral and written communication in business and personal use provided a narrow and expanded scope for the study. Therefore, the study participants with experience and knowledge of wireless device texting and 9-1-1 emergency reporting created the boundaries of the study. Systems theory, systems thinking, critical theory, and Lewin's (1942) change-management comprised the theoretical boundaries of the study. Conceptual elements contributing to the scope of the study involved emergency reporting, communication, wireless device texting, technology, and change-management principles. The scope of the study included the study's potential transferability of the evidentiary findings to PSAP operations nationwide preparing to enter into the wireless device text messaging use within NG9-1-1. Delimiting boundaries included only considering incoming calls for emergency service occurring in the predefined 7-day period. The delimiting factors applied to the study were not a means to limit findings pertinent to the study; the identified and applied delimitations focus the findings for study timeliness and the participant experience.

Significance of the Study

The significance of the study centers upon language use. Specifically, the use of written language in the course of submitting a NG9-1-1 emergency report using the text-messaging feature from a wireless mobile device. The White House Office of Telecommunications in a national policy statement (NENA, 2013, p. 1) highlighted the benefits of citizens using 9-1-1 for placing a telephone call in seeking local police, fire, rescue, and medical emergency services. Proposing an alternate reporting process, in the form of sending a wireless device text message, for citizens to use should not compromise giving the public fast and easy access to a PSAP (NENA, 2013, p. 1). While the proposed text message reporting process is an alternative and does not replace dialing 9-1-1 to seek the delivery of police emergency service, the integrity of the national policy must remain. NENA (2014b) guidelines advised, "Texting should only be used when you are unable to make a voice call to 911" (p. 1).

The applicability of using E9-1-1 orally-communicated emergency reports, relative documentation, and literary references as an exploratory platform into how text messaging can assimilate as a chosen communication method (CCM) in a police public response process garnered insight and discovery into the use of written language versus oral language as a means for emergency communication. By involving the study participant observations and interviews along with supporting evidentiary artifact documentation to guide the introduction of such a highly visible societal happening, the importance of this study manifested within the discovery, understanding, and contemplation of the phenomenon. Emphasis including collaboration and coordination in

change-management and workplace technological advancement elaborated significance in this study. Ideally, PSAP stakeholders will learn how the use of text message exchange can affect actions and reactions (Hutchby & Tanna, 2008, p. 152) in emergency transactions where time is critical to rendering police services. Leaders, managers, and almost all individuals participating in emergency communication sharing can draw insightful conclusions from the study on how to approach the introduction of NG9-1-1 wireless device text messaging use, what to possibly expect during the transition, and what each stakeholder may expect in the new process, and continued support of the White House Office of Telecommunication's national policy. The significance of the study included potential transferability of the study findings extending to outside area PSAP centers nationwide preparing to incorporate the NG9-1-1text messaging reporting feature. The study's findings provided usable evidence to consider for the new written process development requisite for policy and process updating contributable to communications units operation procedures.

Contributions to Social Change

When individuals in a communication exchange assume, presume, or infer a myriad of preconceptions, the need to understand and acknowledge the linguistic differences that exist, as well as the differences that exist when the use of oral communication changes to written dialogue is critical. Through acknowledgement of the understanding that individual differences exist, the processes and procedures functional to wireless device text messaging allow for developing and realizing effective and efficient outcomes (Hart, 2010, p. 5). The apparent need for accurate, clear, and precise

information throughout an emergency event along with minimal miscommunication is necessary for successful emergency response. Operability awareness, a result of technology enhancement awareness, reveals through research that research thoroughness of new processes can alert leadership of the need to ensure stakeholders' preparedness for the new communication interchange. PSAP operation protocols to induce continued efficiency, effectiveness, and timely response to emergency reports can also be predetermined or established for inclusion in the communications SOP (Alcatel-Lucent, 2009, p. 1). By addressing the phenomenon of the wireless device text-messaging feature beforehand, saving lives and property remains the top priority during the receiving of an emergency text message. Omitting the steps of being proactive regarding the exploration of the phenomenon by leaving the mechanics of the change until the time of the change can be deadly.

Summation

Responding to NENA's encouragement and the socially popular growing medium of SMS or text messaging use by mobile phone users (Lam, 2012, p. 181), San Antonio is poised to introduce NG9-1-1 wireless device text messaging interchange as a facet to the E9-1-1 emergency reporting system technological and societal advancement. The communication change (i.e., written text messaging from oral conversation) creates changes within current PSAP operational process. Written language for police emergency reporting involves changes in communication styles, processes, strategies, and practices (Cheng & Seeger, 2011, pp. 64-76). A qualitative research case study for exploring the communicative properties and actions present within E9-1-1 orally initiated citizen calls

lends insight into the use and application of written language in emergency reporting. Systems theory ideology guided and enforced the assumed premise of the study. By researching multiple conceptual variables meaningful to the social phenomenon surrounding potential wireless device texting messaging feature inclusion and use within NG9-1-1, PSAP stakeholders will benefit from a comprehensive change-management process. Through an inductive construct of the elements vital to the understanding of the study's significance, the goal of the study was to be armed and knowledgeable for the transition. Research questions, framed to uncover how requests in written language form can affect stakeholder processes, generated scholarly literary findings relevant to the proposed use of wireless device text messaging in police public safety response situations. In Chapter 2, I present the available scholarly literature pertinent to this study’s framework along with a discussion to address the gap within the current literature relative to text messaging in an emergency response environment.

Chapter 2: Literature Review

Introduction

Qualitative scientific research inspires discoveries through exploration. Exploration and discovery extends into the literature review chapter where my challenge was to synthesize, through strategy, the practical and academic in response to this study's inquiry and purpose. Only through the search and synthesis of available literature as well as the engagement of scholarly discourse pertinent to the phenomenal problem statement, purpose, methodology, and study framework can I meet the obligation of fully informing the reading audience (Burian, Rogerson, & Maffel, 2010, p. 49). The challenge to writing an informative literature review chapter lies in the discussion of important relational elemental discussions, both consenting and dissenting, presented in meaningful context to the reader as a means of connecting known academic literary findings to the studied phenomenon (Carson, 1999, p. 433). The study's purpose explored the use of written communication via a wireless device text message to report an emergency to the police. I searched for, retrieved, and examined the scholarly discussion of written communication and language use, wireless device text messaging use, technology, change-management, and police public safety emergency operation. The literature review aided in discovering and uncovering the multiple variables inclusive in the proposed introduction of written communication, via wireless device text messaging within a PSAP operation.

Communication interaction creates perceptions reflective of people's thoughts and activities through a series of messages-to-signals (production) and signals-to-messages (interpretation; Zuidema & Verhagen, 2010, p. 58). Variations of communication styles,

processes, strategies, and practices (Cheng & Seeger, 2011, pp. 64-76, 69) actively managed within spoken conversation systematically differing from a text exchange form (Hutchby & Tanna, 2008, p. 161). Each participant needs to adapt particular premises in the communication process to achieve mutual understanding with other subjects (Kernstock & Brexendorf, 2009, p. 390). Texting induces physiological changes (Lin & Peper, 2009, p. 53), decreases attention span (Hart, 2010, p. 5), and can be "hard to understand which reduces their effectiveness" (Gold, Lim, Hellard, Hocking, & Keogh, 2010, p. 797). When considering the advancement to written text communication, within NG9-1-1 PSAP operations where voice communication is primarily used, changing circumstances suggest transcending the current production and interpretation practices (Polla & Honkela, 2010, p. 1265). Communication and understanding, constructs of Habermas's (1984) TCA, are multidimensional processes that must exist between PSAP stakeholder participants (Kernstock & Brexendorf, 2009, p. 4). The information received by 9-1-1 operators must be thorough as a means for the operators to reflect the reported emergency events accurately (Perin, 2011, p. 1). When relating at a distance, one lacks immediate feedback, one cannot know the effects of one's words on others, and the all-important components of eye contact, voice tone, and body language are missing (Hart, 2010, pp. 5-6) that are necessary requirements to engage in effective encoding, decoding, and feedback as part of the communication interaction process.

Introducing wireless text messaging can present change challenges incumbent upon the human factor; however, the power of community and community action will influence important and significant change efforts (Hornstein, 2008, p. 5) where the

change agent role and uncontrolled growth (Westover, 2010, p. 47) can affect operations. A firm's organizational and environmental evolution, inclusive of culture and climate, can equally be steered by the new technology adoption and strategic alignment (Siriram, 2011, p. 13); therefore, the influence of the responding agency's deployment of resources may result in a more focused and effective response (Jasso et al., p. 273). Exploring and understanding the wireless device text messaging feature and potential impact in police emergency reporting is vital to sustaining the timely processing of emergency reports, developing the needed policy operational procedures, and informing the change-management process to users. Reflections of communication, technology, text messaging use, police emergency reporting, and organizational change highlight the phenomenon complexities presented in the remainder of the chapter.

Literature Search Strategy

NG9-1-1 is an unfolding occurrence in the PSAP environment with implications throughout society; a scarcity of scholarly literature on the subject of NG9-1-1 is attributable to the infancy of the developing change in the public safety emergency reporting process. Key search words, for the study's literary supplemental requirement, mimic the conceptual framework elements consisting of terms such as *emergency reporting*, *E9-1-1*, *NG9-1-1*, *police public safety*, *oral communication*, *written communication*, *text messaging*, *information technology*, and *change-management*. An extensive examination of several databases, such as ProQuest Central and ABI Search, in the Walden University virtual library ensued to conduct the literary search. As an alumnus of the University of Phoenix (UOP), I likewise conducted a similar literary

search of UOP's virtual library. However, trade and business magazines such as *Emergency Communications Professional*, the magazine for emergency communicators were found to contain the most useful and pertinent information regarding the NG9-1-1 revelation. I used the noted keywords to search the Worldwide Web to obtain information factual and relative to the study. In pursuit of exploring the literary gap essential to my research, I used an analytical strategy to perform the literary search to ensure I achieved a knowledgeable understanding of the background of the problem through a thorough exposure to previous research related to the study topic. The thorough exposure to previous research was also strategic in order to identify what was missing from prior research (Burian et al., 2010, p. 51).

Public Policy and Administration

The proposed use of the wireless device text messaging operational feature within NG9-1-1 frames and shapes a course of action. Public policy enactment includes regulatory actions via courses of actions surrounding natures of problems in society (Kilpatrick, 2015, p. 1). Teller (2013) stated:

> It makes sense for social scientists to become more involved in policy, because many of society's most challenging problems are, in essence, behavioral. Using social scientists' findings to create plausible interventions, then testing their efficacy with randomized controlled trials, can improve — and sometimes save — people's lives, all while reducing the need for more government spending to fix problems later (p. 1).

Helping to shape and influence public policy is a responsibility of both individuals and groups through education, advocacy, and mobilization of interest groups (Kilpatrick, 2015, p. 1).

Social and political theories, in addition to conceptual relationships, can guide and influence leaders and administrators in establishing new policy and processes; however, practical experience and perspectives of individuals directly engaged within a phenomenon create a distinctive level of reality when considering outcomes and possibilities (Trousset, Gupta, Jenkins-Smith, Silva, & Herron, 2015, p. 48). The incorporation of wireless device text messaging through the perspectives of individuals can assist leaders and policy makers in the formation of policy through a sound policy making process (Akompad et al., 2013, p. 1003). The process of integrating stakeholder feedback, through a collection of perspectives, as outlined in the NPM paradigm of service planning and provision (Cassia & Magno, 2011, p. 550) conveys innovation through leadership. The process inclusion of stakeholders simultaneously offers leaders insight into the customer service experience (Anonymous & Pan Canadian Consortium for School Health, 2010, p. S22). Promoting positive customer service interactions resonates within the objectives and values of COSA's delivery of public service (COSA, 2014, p. 1). Successful customer service derives from accurate, timely, efficient, and effective service delivery. In the case of police services, safety adds to the list of deliverables (Friedman, 2007, p. 1).

Within the sphere of customer service, communication is a notable necessity. Therefore, communication is an integral and necessary process in providing a requested

service to customers. In public service, all citizens are customers. Being a good listener is one of the mandates of quality customer service and is represented by "taking the time to identify customer needs by asking questions and concentrating on what the customer is really saying, listening to their words, tone of voice, body language, and most importantly, how they feel" (Friedman, 2007, p. 1). NG9-1-1 incorporates a new or different modus operandi that alters the ability of the police call-taker to listen to caller's words, tone of voice, and expressed feelings due to the displacement of audio sensory signals that have typically assisted call-takers (USDOT, 2014, p. 2). City administration, police command, and PSAP management must recognize the need to maintain successful customer service levels when oral communication replaces written communication.

Corroboration is equally important in communication. This study addressed the vitality of communication responsibility between PSAP stakeholders when incorporating wireless device text messaging in emergency reporting. Maintaining successful customer service can be the difference between life and death. Life and death is a safety compulsion that can hinge upon collaborative conditions (Sun et al., 2009, p. 770). I recall a situation relayed to me by a previous police communications lieutenant where a reported emergency revolved around a woman locked out of her vehicle and who needed assistance getting the car door open. After several minutes of exchanged conversation, the asking of questions and receiving answers, the final piece of provided information was that her baby was in the car. Sending a clear message when detailing an emergency is important to the reception of the message; both the sender and receiver have a responsibility and obligation to satisfy mutual beneficial needs manifested in the shared

communication where the communication is contingent to the service requested (Hutchby & Tanna, 2008, p. 150). When public safety police response is the essence of the emergency request, ensuring the security of the individuals surrounding the emergency report is essential. Pertinent and minute details affect an individual's safety because in an emergency seconds matter.

The Public Education Plan, a NENA reference publication, outlines policy guidance within the NG9-1-1 Text-to-9-1-1initiative (NENA, 2014a, p. 1). Using simple words, keeping text messages brief and concise, including the location of the emergency and the nature of the emergency, not using text abbreviation or slang so that the intent of the dialogue can be as clear and possible, and answering questions and following instructions from the 9-1-1 call taker (NENA, 2014a, p. 3) are inclusive in the plan. NG9-1-1 policy-making and the defining of specific PSAP procedures through the benefit of stakeholder input for comprehensive understanding and collective action legitimizes processes (Trousset et al., 2015, p. 46) and the findings of this study offered legitimization.

Theoretical and Conceptual Framework

The citizen to police call-taker to police dispatcher to police officer process epitomizes the systems theory structure and content. Decisions made at the citizen and police call-taker actions have vital consequences in process actions specific to the remaining constituent components found in the emergency reporting system. Practical knowledge and experience revealed through gaining perspectives from users contributed process and policy relevance beyond the reach of political decision-making and produces

teaching (Andersen & Loftager, 2014, p. 511) and study material to gain knowledge of a phenomenon. The introduction of the wireless device text messaging feature within NG9-1-1 PSAP operations presents written language use, wireless device text messaging, change-management, technology, emergency reporting, and police public safety as the main variables significant relatable to the study's focus. Police public safety response is jeopardized if facilitation of information acquisition and decision making in emergencies where the call-taker does not have "control and understanding of the condition or situation at the other end" (Chandrasekaran et al., 2013, p. 733). Racifi and Dagger (2010) indicated a lack of research apparent when examining the role of written communication in a service relationship context (p. 104) and substantiated the exploration of the use of written language in a PSAP emergency reporting environment where safety, life, and death pivots upon the initial contact between call-maker and call-taker. In such instances, missing words or misspelled words during message-making can cause delays during the use of the NG9-1-1 wireless device text-messaging feature. Ineffective information sharing emerges from meaning differences and obstacles in the use of written language between individuals and can result in reduced efficiency (Carroll et al., 2013, p. 286). Language economy use in text messaging involves the use of abbreviated word forms (Dabroska, 2011, p. 7) and call-takers must be cognizant of language economy use by senders while also being aware of common misspelling of words in the text. A new learned skill set for users becomes apparent in the technological advancement to wireless device text messaging and promotes the consideration of intervention opportunities for stakeholders (Carroll et al., 2013, p. 286). If the basic initial

contact by the sender via the text message does not contain an adequate amount of information to assess the emergency, the repeated need to send and receive text messages will delay the processing of the report.

Deconstruction of the phenomenon conceptual framework into definitions of the various expressions affecting all the stakeholders can enhance discussion of the worth of the research and elaborate as well as equate the phenomenal actions by and between the participants (Ellis & Levy, 2008, p. 17). The synthesis of the literature and documentation pertinent to the societal phenomenon of introducing wireless device text messaging, as a CCM to report police public safety emergencies to PSAP personnel, is offered for constructively debating the concepts of police public safety, emergency reporting, written and oral language use, technology, and change-management important to the study's framework. Through scholarly dialogue of previous research related to the topic, discussion enhanced the overall knowledge available on this subject. The complexities of both machinery and human interaction and the intricate relationships (Amerson, 2011, p. 427) enfolded within the equally consequential operational framework of emergency reporting guided the discussion and debate throughout the remainder of this chapter. An overarching theory, in this study, was systems theory that promoted the interrelatedness of the concepts within the operational framework. According to von Bertalanffy (1969), through the complexity of interacting elements, a viable system emerges and exists in an environment consisting of interrelated and shared properties. When referring to systems and the continual state of evolution, systems are *self-regulating* (they self-correct through feedback; pp. 3-5). System thinking includes the

sum of the parts as well as the part of the whole thinking relative to the connections between the working elements so that the interrelatedness creates the whole (von Bertalanffy, 1969, p. 13) and is a guiding theory applicable within change-management in that larger or whole processes are a combination of multiple smaller processes. Systems thinking is construct viewpoints that the parts of a system affect the performance of the whole in that all of the parts are interdependent (Sheffield, Sankaran, & Haslett, 2012, p. 129). The PSAP call taking and dispatch operations exist as a cohesiveness of interrelated smaller subsystems in emergency reporting as well as larger complex SAPD systems. The incumbent change within the NG9-1-1 environment to extend to the use of wireless device text messaging can result in consequences to the remaining activities (Rangamath & Rodrigues, 2012, p. 6) and serves as a prime area where the inclusion of leadership and administrative overview awareness, engagement, and commitment will be suitably appropriate. Because the parts are interdependent, triangulating the process interrelatedness must be implicit not only in the ensuing research study but as an umbrella to quality assurance significance. Sustainable subsystem and complex system practices based upon evidence discovered through in-depth qualitative data reflective of individual's perspectives reveal insight into procedural changes to integrate the NG9-1-1 text-messaging feature into practice (Kaae et al., 2009, p. 36). Examining the relations of spoken language to explore how the transference to written text messaging will aid in understanding and realizing how such actions will subsequently influence consequences in the larger organization of SAPD is a systems-thinking principle.

Silos separate business processes. In organizations, silos represent barriers between business processes that can hinder internal communications in the organization. Silos should not surround or exist in PSAP operations where multidimensional and oftentimes simultaneous processes occur. Reception of an emergency report, by PSAP police call-takers in the form of a wireless device text message, can influence reflexive actions that extend and proliferate to the police dispatcher and the responding field officer. Recognizing that relative processes are not immune from action or reaction by police personnel within the PSAP operational processes legitimizes the need for clear communication in the emergency reporting process. As such, change on one side of the house cannot occur without possible effect to the other side of the house and reflective of a systems-thinking (Huebner, Varey, & Wood, 2008, p. 213) philosophy. By exploring oral language use within the police emergency environment, the exploration acted as a guide to understand how wireless device written text-messaging use can weigh, compare, contradict, or correspond to existing Police Department PSAP operations. The impact of this study's findings to exploring the use of language to the practices in the call-taking duties aids in sustaining the police service and delivery quality indicators to ensure efficient and effective service delivery to the SAPD customers. Inspirational theoretical value emerged through the literature review and discussion of TCA, critical theory, and organizational theory.

Calls for Help

Rights and privileges incite rules and responsibilities. The SAPD's mission includes reducing fear and crime by "creating a safe environment in partnership with the people

we serve" (SAPD, 2013, p. 1). 9-1-1, the primary telephone number established for quick response for persons seeking police, fire, medical, rescue, and other emergency services (COSA, 1988, p. 1), is an important public service ensuring personal safety in matters of life or death (Americans with Disability Handbook [ADA], 1991, p. 1). The operation within the PSAP (i.e., 9-1-1 call center) depends upon information exchange and the management of the information (Caglio & Ditillo, 2012, p. 61) through administration, planning, preparedness, and facilitation (Milushev, 2009, p. 17). Processes and protocols contained in established SOP guide how PSAP personnel execute duties pertinent to the assistance public citizens expect and rely upon local government to deliver. The interaction between PSAP stakeholders form the critical relationships necessary to ensure the sharing of essential details surrounding the emergency. See Table 1 accentuating call volume acknowledging the number of instances of police emergency communication. Fundamental to information sharing is the citizen caller relying on call-takers to send help. Equally fundamental to the information sharing is the call-taker relying on the call-maker to provide basic information of the reported emergency; however, the information may not always be accurate (Jasso et al., 2009, p. 265), misunderstandings can occur (Perin, 2011, p. 1), heightened emotions can present a challenge (Warner, 2010, pp. 28-29), and technology-based equipment can fail. Communication is the key during the emergency operations and therefore creates the cornerstone for the remaining actions occurring throughout the situation.

Table 1

2013 San Antonio Police Department (SAPD) 9-1-1 Call Statistics

Month	911 In
January	99,769
February	93,547
March	108,793
April	106,190
May	114,975
June	108,985
July	113,362
August	112,759
September	102,653
October	106,261
November	99,998
December	103,669
Totals	1,270,961

Note. From Mr. Juan Vargas, SAPD Communications Unit, 2-6-2014. Reprinted with permission.

Descriptive studies (i.e., qualitative inquiries) are less available in scholarly literature where quantitative research traditionally establishes knowledge base foundations within speech language such as phonology, morphology, and syntax (Hammer, 2011, p. 161). By exploring orally delivered emergency call reports, known variances in speech language can aid in extending and interpreting how written language use through wireless device text messaging responds similarly or differently to areas inclusive of phonology, morphology, and syntax. Following Damico and Ball (2010) in using qualitative methods "to seek answers to questions that stress how social actions and social experiences are created and sustained" (p. 15), I expanded the current knowledge base by employing strong rigorous methods. The rigorous methods involved purposefully

selected cases where systematically collected data through observations, interviews, document reviews, artifacts, and audio recordings in a bounded system occurred (Hammer, 2011, p. 162).

Public Safety Answering Point (PSAP)

Communication, during emergencies, is crucial. The legitimacy process (Lee, Kim, & Kim, 2010, p. 414) inherent within the reporting of emergencies is that help will come. However, in support of the process, the delivery of accurate information, from the call-maker, and, in turn, the reception of the information, by the call-taker, exclusive to the emergency is necessary to efficiently respond to individual emergency calls and assisting call-makers (Jasso et al., 2009, p. 265). 9-1-1 call-takers are important first responders (Perin, 2011, p. 1) and must establish a positive rapport by using effective communication (Ahmed, Shields, White, & Wilbert, 2010, p. 107). 9-1-1 call processing for public safety aims to ensure efficient police response results; therefore, police officers rely on the police call-taker's understanding of the situational awareness (U.S. Department of Energy [USDE], 2013, p. 1) surrounding the emergency event. By ascertaining, from the call-maker, basics such as where, what, and when, the police call-taker must develop an understanding of what is going on in order to summarize facts to be passed to the police dispatcher which in turn are relayed to the police officer prior to encountering the emergency situation (Perin, 2011, p. 1). “Information given by individual call-makers in many cases is not reliable or accurate enough for an effective and efficient response” (Jasso et al., 2009, p. 273) and in many cases the call-taker must rely on subjective interpretation (Perrin, 2011, p. 1) in order to execute tasks during a

crises (Milushev, 2009, p. 21). Every incoming emergency call accentuates a unique set of challenges that influences the call-taker's approach for providing solutions (Warner, 2010, p. 28). Therefore, minimizing misinterpretations and lack of information (Perin, 2011, p. 1) while creating solutions that facilitate the call-taking and dispatching processes (Cassidian, 2013, p. 1) where information presents in a cascading fashion must exist in the strategic and decision-making environment (Huebner et al., 2008, p. 210). To assist in developing call-taking expertise, simulated scenarios, prior to live call taking, is part of the call-taker's training (SAPD, 2012, p. 18). Supervised monitoring, during live calls at the conclusion of the simulated training, further offers the call-taker the opportunity to develop needed skills. In addition to training, experience, and knowledge, the call-taker can rely on external aids during decision-making technological processes in order to pass-on the emergency detail information to the police dispatcher.

Dispatchers are coordinators. Performing critical real-life work in a police command and control center (Gunal, Onggo, & Pidd, 2008, p. 171), the dispatching functions include remote active participation of the emergency event by ensuring appropriate deployment of response resources and overall event monitoring (Jasso et al., 2009, p. 265). By drawing upon skills and abilities, the dispatching function serves as an integration of networks forming a hub (Brundiers, Wiek, & Redman, 2010, p. 315). A constant state of flux describes the processes and actions inherent within the dynamic environment of emergency dispatching (Warner, 2010, p. 26). Dispatchers should feel far from being second-class citizens (Perin, 2011, p. 1) as the skills necessary to intervene on behalf of and represent the concerns of the call-maker, call-taker, and police responder

requires implementing collaborative processes through key competencies using assorted degrees of intensity (Brundiers et al., 2010, p. 312). Abilities to solve problems resourcefully are particularly applicable to time-centric and pressure-filled job tasks (Cooper & Tang, 2010, p. 42). Through various resources such as CAD, mapping, radio use, and situational monitoring, police dispatchers assist in controlling the events surrounding the emergency and "somehow controls absolutely the response of the officers and therefore the outcome of the scene" (Perin, 2011, p.1). Compared to picking up bits of information from one-sided conversations (Warner, 2010, p. 26), the dispatcher, as a middle man, relies on the call-taker to provide a narrative of the vital information unique to the emergency situation in order to pass on to the officer before walking into a scene (Perin, 2011, p. 1). The police dispatcher engages in organizational and cultural communications inspiring the commitment to build strong trusting working relationships with coworkers (Ahmed et al., 2010, p. 108). The urgency of the coordination of activities shared between the dispatcher and the call-taker as well as the dispatcher and police officer requires a strategy resulting with the citizen receiving the emergency response requested.

Information from the police dispatcher to the police officer occurs verbally, in writing, or both. The final destination point of the emergency reported by the citizen is the responding police officer. Either a phoned in or a texted emergency report, by the citizen, to the police call-taker, passes between three individuals prior to reaching the responding police officer. Police officers rely on and use the received information to prepare for the emergency encountered; therefore, the keyed up or written information,

via the Tri Tech Powerline, should be specific, succinct, clear, comprehensible, and perspicuous. Because of the progressing course of the relayed information, the importance of the primary shared communication between the citizen and police call-taker should distinctly focus on the needed facts of the emergency circumstances. The responding police officer does have access to return communication with the police dispatcher for any needed clarification emphasizing the magnitude and consequence of any miscommunication, misunderstanding, or lack of shared communication. While stakeholders share responsibility, the responding police officer confronting the emergency bears the most responsibility of ensuring safety to life for citizens as well as their own personal safety. When a person's safety may be at risk, the accuracy and completeness of the message appraising the emergency can reduce the risks. In the NG9-1-1 environment, with the tables partially turned in that the citizen initiates the wireless text message without initial guidance from the police call-taker, historically known processes alter though the importance of the accuracy and completeness of the message remains the same. In information-sharing situations, communication is the link between the actual and the outcome (Huebner et al., 2008, p. 205). In emergencies, the communication intensifies when life can be at risk. Knowing the facts surrounding the emergency can make a difference in matters of life and death. Policing activities include forming strategic directions, crucial decision-making, and problem solving (Lee et al., 2010, pp. 418-419), as such, knowing facts of the potential emergency event provides the opportunity to prepare and focus on the resources possibly required to address the situation (Pearson, 2011, p. 31). Policing capabilities and preparedness to respond to the

event (Milushev, 2009, p. 18) intensifies when considered in tandem with the need to control for the difficulty (Moreno et al., 2009, p. 92) of the reported emergency. Reported emergency calls consist of disturbance and service calls ranging from problems with persons, problems with property, and traffic problems (Sun et al., 2009, p. 761); with this in mind, the more detailed information the police officer knows the better to plan for the encounter. The police officer confronting and combating the crime (Nair, Luqman, Vadeveloo, Marimuthu, & Shanmuggam, 2012, p. 115) is the intentional outcome of the chain reaction beginning with the call-taker engagement with the call-maker extending to the police dispatcher and finally to the police officer enacting with the call-maker thus completing the circle (see Figure 2). Developing strategy leading to problem solving and decision-making does not exist in a vacuum.

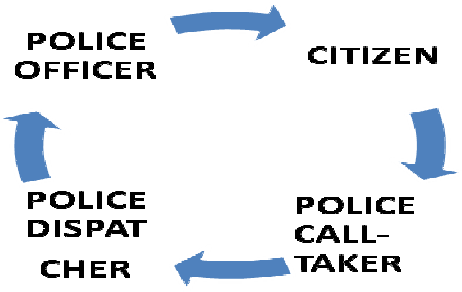

Figure 2. Emergency reporting process.

The struggle to inserting the use of wireless device text messaging into the emergency management process in a successful outcome should derive through a critical assessment of realization where weighing the practical use through perspectives of individuals best representative of a population positioned to engage in the practice (Wellmer, 2014, p. 706). Critical theory further acknowledges the forces present within the proposed introduction of Text-to-9-1-1. The local government policy and

administration acknowledging a change method incorporating the perspectives of citizens to create an informed course is one force. The conception that text messaging is a form of communication occurring between well-acquainted parties (Tjora, 2011, p. 198) and text messaging exchange systematically differs from oral conversation (Hutchby & Tanna, 2008, p. 161) constitutes another force entwined in this study's phenomenon.

Technology

Technology evolves, transforms, and sustains society. The transition of E9-1-1 to NG9-1-1 is a lineation of business strategy, Information Technology (IT) strategy, and IT strategic alignment (Abareshi, Martin, & Molla, 2010, p. 8) that begets business collaborating for technological support through consolidated managed services so emergency personnel can focus on the immediate task of providing lifesaving services (Smith & Holmes, 2010, pp. 18-20). Technological advancement, within NG9-1-1, consolidates and incorporates ESInet along with broadband technologies to support delivery and acceptance of text, video, images, instant messaging, and data services (Berryman, 2010, p. 22). The incorporation of wireless text messaging use as a viable means for citizens to report emergencies emerged as a resulted effort to connect more closely with societal users of wireless devices (Jasso et al., 2009, p. 273). Therefore, in a congruent manner that the development of ICT is indispensable to life and advances society as a whole by providing advantages for people and organizations (Masrom et al., 2011, p. 370) so the relation is inferred that society advances technology. Equally born from the aftermath of September 11, 2001, NG9-1-1 is a response for a fully interoperable wireless high-speed public safety network for better communication among

first responders (Department of Homeland Security [DHS], 2012, p. 1) and a catalyst for competitive advantage (Siriram, 2011, p. 13) by extending to and incorporating commercial integrative wireless technologies (Alcatel-Lucent, 2009, p. 1). Through a multimedia developed platform, wireless caller-makers using features adapted and inherent in the NG9-1-1 system will have the ability to send a text message to police call-takers (Roach, 2005, p. 33). The application of systems thinking is pivotal, as such neglecting the human factor during information technology implementation can further impact belief that simply purchasing advanced technologies will lead to success (Hornstein, 2008, pp. 1-2). Long-term implications and nonlinear behaviors (Brundiers et al., 2010, p. 308) of human actions, as well as the enhanced technological integration, beseech a unified and coordinated planning methodology among affected stakeholders to sustain the pursuit to protect life, safety, and property (Milushev, 2009, p. 17). Pateli and Philippidou (2011) contributed technology-induced changes in the public sector connect with the NPM reform (p. 127) by embracing practices and techniques drawing closer philosophies between public and private concerns (Christensen & Laegreid, 2007, p. 3). The importance of collaboration, coordination, and communication cannot be understated.

Advancement and achievement with NG9-1-1 wireless device text messaging relies upon many factors and many individuals. While the adoption of new technology links to a firm's performance, the linkage fell short of including respondents outside of a business firm or testing the new contribution of new technologies to convergence and collaboration (Siriram, 2011, p. 21). Including citizens perceptions regarding reporting

emergencies to the police inserts respondents outside the governmental entity (i.e., firm) as a factor impacting upon a firm's performance increases the magnitude of who or what can influence the relationship of new technology to a firm's performance. Including change-management, as a conceptual factor, in my study also added an inquiry into the essence of convergence and collaboration within the overall relationship between new technology adoption and a firm's performance.

Using Language

Communication, a 24-hour a day process in police public safety emergency reporting, encompasses a range of various scenarios and PSAP call-takers must be alert and prepare for all situations. Speaking, hearing, and understanding are basic processing component that portray an oral communicative mode between call-maker and police call-taker. The communication process illustrates messages-to-signals production and signals-to-messages interpretation (Zuidema & Verhagen, 2010, p. 55). The NG9-1-1 inclusion of wireless device text messaging as a written communicative mode between call-maker and call-taker similarly incorporates and practices the production and interpretation techniques through written language cognitive abilities. E9-1-1 call-takers perform interpretation (Perin, 2011, p. 1) through information exchange with the individuals identified as language initiators or producers (Zuidema & Verhagen, 2010, p. 50); call-takers consequently are also language producers when the call-maker acts as the interpreter.

Written language production and interpretation become the mechanisms for the construction of intelligibility (Gibson, 2009, p. 11) requisite within the NG9-1-1 wireless

device texting proposed implementation. The relational impact of written communication (Racifi & Dagger, 2010, p. 108) advances the achievement and negotiation of interaction (Gibson, 2009, p. 10) where clarity and spelling induce effective written communication (Racifi, & Dagger, 2010, p. 103). Expectations relative to written communication are parallel to those for oral communication (Dallimore, Hertenstein, & Platt, 2008, p. 167); however, writing is not a matter of simple transmission (Smith, B., 2011, p. 155). Therefore, the ability to use message making as a means to co-create solutions and collaborative advantages (Racifi & Dagger, 2010, p. 105) includes transforming ideas into words where developing, organizing, supporting, and presenting arguments (Dallimore et al., 2008, p. 165) is a consideration necessary for successful transition to using wireless device text messaging in an emergency operation. Racifi and Dagger (2010) indicate a lack of research apparent when examining the role of written communication in a service relationship context (p. 104) and as such the exploration of the use of written language in a PSAP emergency reporting environment where safety, life and death generate community concern. In such, missing words or misspelled words during message-making can cause delays during the use of the NG9-1-1 wireless device text-messaging feature. The asynchronous communication mode, when multiple text transmissions are necessary in order to ensure the call-taker's correct interpretation of the received message can delay rescue action.

When communication effectiveness plays a main role (Jorfi & Jorfi, 2012, p. 1), as in cases of reporting an emergency event, the shared communication between individuals must accurately depict current events (Perin, 2011, p. 1) as well as provide

meaning between the individuals. TCA recognizes the presence of universal conditions necessary to forge mutual understanding and interchange between actors for beneficial transactional outcomes (Habermas, 1984, pp. 25, 95, 131-132). The agreement magnitude between language users central to the message and signal exchanges (Zuidema & Verhagen, 2010, p. 58) highlight as well as compound the complexity of the uniquely intrapersonal and interpersonal human activity. Deemed a multidimensional process between the participants (Kernstock & Brexendorf, 2009, p. 390), communication promotes perceptions reflective of peoples' thoughts, meanings, and requests (Zuidema & Verhagen, 2010, p. 59). Communication is an art form that exhibits the inter-change of information inclusive of portraying emotions and transmitting experiences (Liu & Gao, 2011, p. 119) through styles, processes, strategies, and practices (Cheng & Seeger, 2011, p. 63) culminating in agreement of the messages and signals exchange (Zuidema & Verhagen, 2010, p. 58).

Communicative exchanges, between individuals, invoke and demand a full spectrum of cognitive intelligence (Warner, 2010, p. 28). A police call-taker enlists the use of an array of skills, knowledge, and abilities during the oral communicative soft computation (Blitzer, 2010, p. 913) that results in both a linear and nonlinear relationship between a source and a receiver (Ahmed et al., 2010, p. 108). In a linear fashion, call-takers may use a reflective listening technique and repeat to the caller what the call-taker understood from the caller's words (Warner, 2010, p. 26); such an action supports both preemptive actions to ensure the correct message was interpreted as well as to prepare for a rational reaction (Milushev, 2009, p. 17). Additional methods call-takers can employ

include asking pivotal questions necessary for extensive understanding in order to acquire the fundamental information the police officer will require when approaching the emergency scene. As assessed by its causal involvement in putatively nonlinguistic tasks (Lupyan, 2009, p. 711), language has a variety of extra-communicative functions; therefore, nonlinear techniques call-takers may employ include word-smithing, tone and voice reflection, and tempo in order to generate a coherent psychological understanding (Warner, 2010, p. 29). Human emotions and feelings can influence interpretation of events where subjectivity may override objectivity (Vuckovic, 2008, p. 55); individual perceptions can be advantages as well as disadvantages. Reflexively, call-takers may equate the urgency of an emergency response based upon the caller's voice or in the background and not by the words used (Warner, 2010, pp. 28-29). Language use engages an array of cognitive abilities and senses on the part of the call-maker as well as call-taker; therefore, ensuring that the call-taker receives the message as the call-maker intends is the optimal intension and outcome of the communicative language-use exchange. Human communication sound mapping within the mammalian auditory system separates and breaks down an incoming sound wave into the component's distinguishable frequencies that results in speech sounds analysis meaningful to perception (Zuidema & Verhagen, 2010, p. 53).

The use of text messaging (i.e., written language use) omits speech sound production from the sender (citizen) to the receiver (police call-taker). Such speech sound production will also be absent in any reciprocal text message exchanges. Zuidema and Verhagen (2010) consequently discuss the use of digital code resulting in perceptual

distinctiveness where the primary fitness contribution of (text) meaning do not share a systematic signals leading to message agreement between the speaker and hearer. Though the intent of my study was not to develop or determine, via a formal analysis, the extent to which a person's personal knowledge and interpretation influences written words perception when speech sound production from the sender is not available. However, the receiver's personal values, assumptions, beliefs, and expectations (VABES) influence on word interpretation (see Figure 3) impact the message and possible reflective actions placing emphasis in the findings of my study.

1.22.2013 @ 9:51 PM - "I hate texting. I can't tell you how many times I've texted someone and they took it all wrong. There is no voice inflection and in the English language, one stupid work can have many different meanings. For example, the word nuts!" (Post by male #1). 2 Likes received. [Original wording]

1.22.2013 @ 10:43 PM- "I know what you mean…"- (Response by male #2)

1.23.2013 @ 8:00 AM - "I hear the inflection in your voice in your posts… No, wait… I don't.." (Response by male #3). 1 Like received.

Figure 3. Face book postings illustrating a miscommunication and a lack of emotion in text. Retrieved from www.facebook.com

Wireless Device Text Messaging

Smart phone and cellular phone messaging herald the age of electronic communication (Hart, 2010, p. 5) into the next generation of telephone emergency services, including 9-1-1 services (ADA, 1991, p. 71). In NG9-1-1, wireless device users can send a text message (i.e., SMS) to deliver an emergency request for police public safety (see Figure 4). The written text message communication contains attributes similar to oral communication such as comprehensive, perspective, interpretive, and responsive characteristics requisite for speakers and hearers to agree upon shared meanings (Zuidema & Verhagen, 2010, p. 55) although on many differing levels characteristics

exist resulting in text message exchange differing from verbal conversation (Hutchby & Tanna, 2008, p. 143). Phonology, morphology, syntax, and semantics affect an individual's cognitive abilities (Zuidema & Verhagen, 2010, p, 48) which effect mutual understanding between parties engaged in human language exchange. Communicating from a distance, via written language, stresses linguistic concerns pertaining to how word use and reciprocation can affect a timely shared communicative interchange between the parties (Hart, 2010, p. 5). In the emergency response arena, several interchanges may be necessary to ensure full and complete understanding of the emergency. Phonology, using sound to perceive word meaning, acts upon natural interpretation within the frequency spectrum (Zuidema & Verhagen, 2010, p. 53); phonology concedes as self-imposed during the reading process as opposed to detection of the sender's vocal tendencies guiding the perception. Morphology, comparable to the qualities of advanced planning (Milushev, 2009, p. 17), addresses the concatenation of symbols along with the approach of how the sound of the language symbols affects the message. Commonly influenced by the spelling of the large repertoire of words in the human language (Zuidema & Verhagen, 2010, pp. 50-55), a shared message contains pre-conceptions by the individuals engaged in the communication exchange. Phrase structure, a crucial design feature of human language (Chomsky, 1959, p. 137), manifests in the grammar use of syntax where word order can influence the intended meaning of the conveyed communication (Zuidema & Verhagen, 2010, p. 53).

Figure 4. Wireless devices.

Considered void in real-time interaction and communication (Hart, 2010, p. 5), text messaging unlike immediate real-time interactive oral communication compounds the likelihood that signals will get confused in transmission (Zuidema & Verhagen, 2010, p. 55). Text processing discrepancies (Braasch, Rouet, Vibert, & Britt, 2012, p. 450) resulting in confused, inaccurate, unclear, or unsure understanding of the situation (Warner, 2010, p. 26) heightens and intensifies the consequences of a successful or unsuccessful interpretation (Zuidema & Verhagen, 2010, p. 55). Semantics, the processing of word definition, can likewise create and cause misunderstanding that can promote reduced communication effectiveness (Gold et al., 2010, p. 797). In oral communication while the call-taker may not comprehend every word relayed by the caller (Warner, 2010, p. 29) and semantics can simultaneously create and cause misunderstanding the opportunity exists to exchange information in a timely manner to clear any miscommunication. In the wireless device texting process, the asynchronous

communication will not be an immediate feedback process therefore dialogue variances between voice and written communications such as language, interpretation, timing, and perception become pristine as delay of the reaction required when text message delivery is used in the emergency reporting environment can be life threatening. Working towards and ensuring positive results between readers and writers regarding which signals are systematically associated with which messages (Zuidema & Verhagen, 2010, p. 55) in the text message format will be in an infant stage, within the NG9-1-1 introduction, and only within a learning environment will the infant mature.

Success is in the details. Distinguishing and detailing information to clarify and enhance an experience is critical within the emergency reporting process. Police call-takers use questions such as "What street are you near?" or "Is the intruder still in the house?" or "Did you see the color of the vehicle?" in order to gain a comprehensive and rich scrutiny of the situation. Police call-takers gaining an accurate portrayal of an emergency is paramount in creating a realistic accounting to forward to police dispatchers; police dispatchers in turn provide the information to the responding police officer. A realistic accounting of detail ensures that precise communication center focus and allocation of efforts and resources optimize for the best possible public safety results (Smith & Holmes, 2010, p.18). Wireless device text messaging is deemed impersonal as well as a type of shorthand (Hart, 2010, p. 6) which can be void of details; the criticality of NG9-1-1 text messaging use for reporting emergencies is understanding, anticipating, and planning for how written text communication characteristics affect the "acceptability, utility, and efficacy of information-sharing" (Gold et al., 2010, p. 793). Word clippings

and contractions, omitting vowels, substituting letters for words, substituting numbers for words, nonstandard spelling and simplification, deleting apostrophes, and deleting pronouns (Dabrowska, 2011, p. 7), common communication practices in the world of texting (see Table 2), exist in the informal text conversation further endorsing the incorporation of thought abbreviation (Hart, 2010, p. 6). The use of language economy (Dabrowska, 2011, p. 7), in text messaging communication, highlights styling and crucial aspects featured within the electronic written text (Neviarouskaya, Prendinger, & Ishizuka, 2010, p. 101) lending to the delineation as a non-rich sort of communication requisite in conveying a complete story or sharing a complete thought (Hart, 2010, p. 6). Situational awareness, encompassing recognizing, understanding, and acting (National Safety Council [NSC], 2010, p. 4; USDE, 2013, p. 2) is imperative within PSAP operations where timely, appropriate, and effective response is incumbent upon comprehension. Text comprehension involves the incremental construction and updating of a mental representation of the situation (Braasch et al., 2012, p. 451) which may not evolve in the abbreviated strategy characteristic of the genre of the short-cut text message (Dabrowska, 2011, p. 7).

Interactive oral communicative processes exemplify a dynamically flowing level of energy where a deep sigh, the slightest nuance of a pause, or voice tone interpreted by the police call-taker represent important components that can efficiently influence, validate, or clarify the shared oral communication. The use of text message (i.e., written communication) does not capture such vocal nuances (Hart, 2010, p. 6). The relative significance is that when such vocal nuances are not present, the reader may interject a

representation of personal interpretation into the written communication seemingly void of the sender's exact intention and conception of expression. Assessed as occurring between well-acquainted parties (Tjora, 2011, p. 198), SMS is a private communication (Dabrowska, 2011, p. 7). Popular uses of text messaging (Huang et al., 2011, p. 449) includes “flirting and dating; SMS-hugging; warning and assisting friends; coordinating discreetly; asking about other people present; commenting on a situation as it unfolds; maintaining strategic collaboration; avoiding interrupting social settings; making practical jokes; and communicating during meetings” (Tjora, 2011, p. 198). Though considered convenient and efficient (Hart, 2010, p. 6), extending the use of texting to the realm of public safety emergency reporting will require a strategy shift, alteration, and modification from the currently known popular uses and applications of wireless text messaging. Year-end 2012 statistics (see Table 3) revealed 326.4 million wireless device users generated 2.19 trillion text messages (Cellular Telephone Industries Association [CTIA], 2013, p. 3) substantiating SMS as the mobile phone's most popular application (Balakrishnan & Loo, 2012, p. 364). The combination of the popular form of societal communication (i.e., texting) and emergency reporting can add a new dimension to public safety police response through the possibility of increased complainant witness reporting.

Table 2

Text Messaging "Shortcuts"

Description	Alternative
Clippings and contractions	
restaurant	resto
address	add
evening	eve
please	pl
Vowel omission	
then	thn
now	nw
have	hve or hv
traffic	trffic
Word-letter substitution	
you	u
is	s
see	c
are	r
Word-number substitutions	
to	2
for	4
tomorrow	2mrw
Nonstandard spellings	
some	sum
good	gud
Apostrophe deletion	
I'm	im
I've	ive

Note. From "Language economy in short text messages" by Dabrowska, M., 2011, *Studia Linguistica Universitatis Iagellonicae Cracoviensis*, 128, 7-21. Reprinted with permission.

Table 3

Year-End U.S. Figures from CTIA's Annual Survey Report

Topic	Dec. '12	Dec. '11	Dec. '07	Dec. '02	Dec. '97
Wireless Subscriber Connections # of active devices, including smart phones, feature phones, tablets, etc. Since users may have more than one wireless device, it is not equal to individual subscribers.	326.4M	316M	255.4M	140.8M	55.3M
Annual Voice Minutes of Use	2.3T	2.296T	2.12T	619.8B	62.9B
Annual Text Messages	2.19T	2.3T	362.5B	N/A	N/A
911 Calls[2] Per day	>400K	>396K	260K	139K	55K

Note. [1]Latest figures as of December 2012 are from Early Release of Estimates from the National Health Interview Survey, June-December 2012. National Center for Health Statistics, June 2013. Unless otherwise noted, facts are from CTIA-The Wireless Association (CTIA, 2013). Reprinted with permission.

My exploration of all aspects of wireless device text messaging use, in emergency reporting, assisted in understanding any ramifications that can occur. Limited to 160 characters per batch, through advanced technology the composed, sent, and received 160-character batches read as one complete message (Hutchby & Tanna, 2008, p. 153). Via extended series of turns in the one-way asynchronous communications (Hutchby & Tanna, 2008, pp. 145-146), the batches can appear disjointed though legible as unfolding sequences of events (Hart, 2010, p. 6). Text messaging can engage a series of message streams (Huang et al., 2011, p. 452) in response to needed communication to obtain who, what, when, and where information required for full-detailed reporting. Referred to as efficient (Hart, 2010, p. 6) as well as a straightforward way of communicating (Tjora, 2011, p. 193), with interactive properties (Hutchby & Tanna, 2008, p. 143), the use of SMS has duly been noted as awkward and inefficient (Tjora, 2011, p. 198). Increase in

respiration rate and heart rate, muscle discomfort, and hand and neck pain have been associated with the texting actions (Lin & Peper, 2009, p. 53).

Emoticons, symbols resembling facial displays (Neviarouskaya et al., 2010, p. 96) by either a text-face or a graphic-face, can be representative of emotional states the sender wishes to relay when the messages are much less informative by themselves due to brevity and incompleteness (Huang et al., 2011, p. 451). The use of capitalization throughout a word denotes shouting or anger and used for emphasis in a sent electronic written text. The auto-correction feature is an available tool for use during the conduction of texting from smart phones; the tool corrects misspelled words, however, the feature can also completely alter the word's meaning the sender intended causing miscommunication during the texting transaction between the participants. Language cognitive abilities of the police call-taker may be impaired due to lack of phonology, morphology, syntax, and semantics combinatorial principles (Lupyan, 2009, p. 711; Zuidema & Verhagen, 2010, p. 48) and any possible miscommunication can elicit delay of the processed emergency request. Development of an evolving language set relative to the use of SMS includes different levels of abbreviations sometimes used without surrounding contextual meaning influencing additional miscommunication (Neviarouskaya et al., 2010, p. 101).

Research by Dabrowska (2011) informs that popular strategies such as word-letter substitution and vowel omission are common uses along with clipping among text users (p, 134); such findings reinforce mock training scenarios and learning processes. Braasch et al. (2012) impart findings pertinent to mock scenario training sessions by lending

importance to discrepancy-induced source comprehension (disc) processing of conflictive versus comparative source information stressing strong evidence of enhanced memory exhibition of conflicting conflict (pp. 450-451). Mental representation, as a cognitive mechanism, likewise enhances text comprehension through incremental construction and updating of situational events (Braasch et al., 2012, p. 451). Incorporating such academic findings provides a basis and can strengthen awareness by the police call-taker for skill development. The findings from my study can equally serve to augment SMS communication studied in shared physical space by Tjora (2011) in adding to findings of commenting on a situation as it unfolds and maintaining strategic collaboration. Parallelism and inconsistencies establishment by and between shared space communication and distance communication adds a dimension relevant to the study as well as future studies to gain understanding of the text messaging process within emergency reporting.

While a give-and-take interaction is a gold standard and benefit of shared communication (Hart, 2010, p. 5), the more time that passes during information-sharing relay and reception to understand the text message communicative transaction between the citizen making the report and the police call-taker the longer it may take help to arrive. In the State of Texas, texting while driving is against the law (see Figure 5); the obvious problem of distracted driving is a safety issue (Hafner, 2009, p. 1). Service reception, from the Internet Service Provider (ISP), is a likewise consideration when mobile phone voice communication is used and equally deserving of consideration when text messaging is used. ISP processing services (i.e., cell tower signal relaying) regulating

the outgoing and incoming message delivery and reception are not easily discernible when compared to voice use. The lack of a non-deliverable error message affecting the transmission of a text message creates a false sense of successful communication to a sender. Text communication participants send messages without constraints (Huang et al., 2011, p. 451) which can be very advantageous to adding eyes and ears in aiding to report criminal and suspicious activity through public awareness and support of police public safety law enforcement. Logically, law enforcement personnel cannot be in all places all of the time; therefore, emergency reporting by victims and witnesses of the criminal activity will increase the intelligence gathering required in police investigation and resolution. The use of texting within NG9-1-1 can also provide an avenue for increasing social responsibility among the public proportionate to wireless device use.

Figure 5. AT&T Mobility campaign.

Change-Management

Change can be far reaching; therefore, alterations, in identified processes, should be a shared and transparent experience among stakeholders for gaining a range of perspectives. An inherent association exists between the use of a process and the conceptualized and measured outcome, there as, a harm-reducing approach is mutually opportune as well as beneficial (Newton-Taylor, Patra, & Gliksman, 2009, pp. 965-966) for stakeholders. In such a public experience, as the intended SAPD NG9-1-1 emergency reporting system, change is inspired and influenced by technology and global mobility defining modern society and a strategically enhanced-meaning learner-centered approach can place a set of circumstances in context (Gonzalez & Fenske, 2012, p. 38). Stakeholder collaborative abilities contribute to sustainable competencies (Brundiers et al., 2010, p. 308), add value and create synergy (Cheng & Seeger, 2011, p. 62), and support more shared decision-making (McDonald, Jayasuriya, & Harris, 2012, p.70).

During collaborative endeavors, stakeholders infuse differing views and contribute perspectives that ignite and fuel conversation and debate for critical appraisals such as input into the NG9-1-1 text messaging process where implications will affect public services (Daniels, Lewin, & the Practihc Policy Group, 2011, p. 4). A case study approach to the text-messaging phenomenon further supports the collection of perspectives from stakeholders to ensure the phenomenon receives thorough consideration as a process change. Considering the phenomenon through the perception of the other's role (McDonald et al., 2012, p. 69) is one way to build trust among the stakeholders during collaboration. Effective positive rapport helps create mutual respect

during engagements where reaching goals and objectives among stakeholders is the intent (Ahmed et al., 2010, p. 107). Interpersonal contact occurring within informational sessions; desktop exercises; and constructive discussions between leaders, policy-makers, end users, and technological experts (Daniels et al., 2011, p. 7) can lead to successful enterprises and endeavors.

Collaboration, communication, cooperation, and coordination with others are essential (Berryman, 2010, p. 24). Bringing together a range of individuals with a stake in the use of text messaging for emergency reporting helps to uncover uncertainty and vulnerability associated with the adoption of reporting emergencies via the use of written language through wireless device text messaging (McDonald et al., 2012, p. 65). Formal, as well as informal, working and community relationships result through common initiatives and achievements of goals in an atmosphere where feedback can be freely shared (Ahmed et al., 2010, p. 108) as well as through idea building aimed to drive alignment and adoption of strategies effectuated through convergence and collaboration (Siriram, 2011, p. 13). Gaining insight into the proposed application and use of wireless device texting technology in an emergency reporting environment, where such technology has not previously been used, can unveil unnoticed, unexpected, or unknown operational limitations. Discussions regarding how the technology and application relates to the intended users and stakeholders entwined in the societal phenomenon can further reveal important changes required in the expressive capabilities of current concepts (McDonald et al., 2012, pp. 63, 69) pertinent to the NG9-1-1 wireless device text-messaging feature.

By approaching the new experience through knowledge development by way of educating and communicating the change to a stakeholder beforehand (Atilgan & McCullen, 2011, p. 11), a proactive and productive method of addressing unaligned emotions, beliefs, and goals in anticipation of legitimizing, promoting, and facilitating (Davis, Weeks, & Coulter, 2011, p. 33) text messaging use in NG9-1-1 emergency reporting can be promoted. A reactive method (versus a proactive approach) can lead to confusion and stress (Ebert & Crippen, 2010, p. 371) during the transition creating multiple adjustments occurring simultaneously during the emergency reporting process when the call-taker's primary focus must remain on the message in order to assist in protecting the public (i.e., the ultimate mission; Smith & Holmes, 2010, p. 20). By engaging a systems-thinking undertaking as well as through the collaborative sharing of the stakeholder's contributive perspectives, stakeholders can garner a holistic viewpoint by considering the entwining and connecting of other stakeholder's actions and reactions. Gaining understanding from others, building on existing knowledge, and not reinventing the wheel are intricate inclusions when advancing a model of conceptual change with theoretical underpinnings. Entering into a new environment is an exploration of discovering not only how to advance the change but also how to adapt to the new environment. Initiating change includes steps of unfreezing, change, and refreezing (Lewin, 1942, p. 215; (see Figure 6).

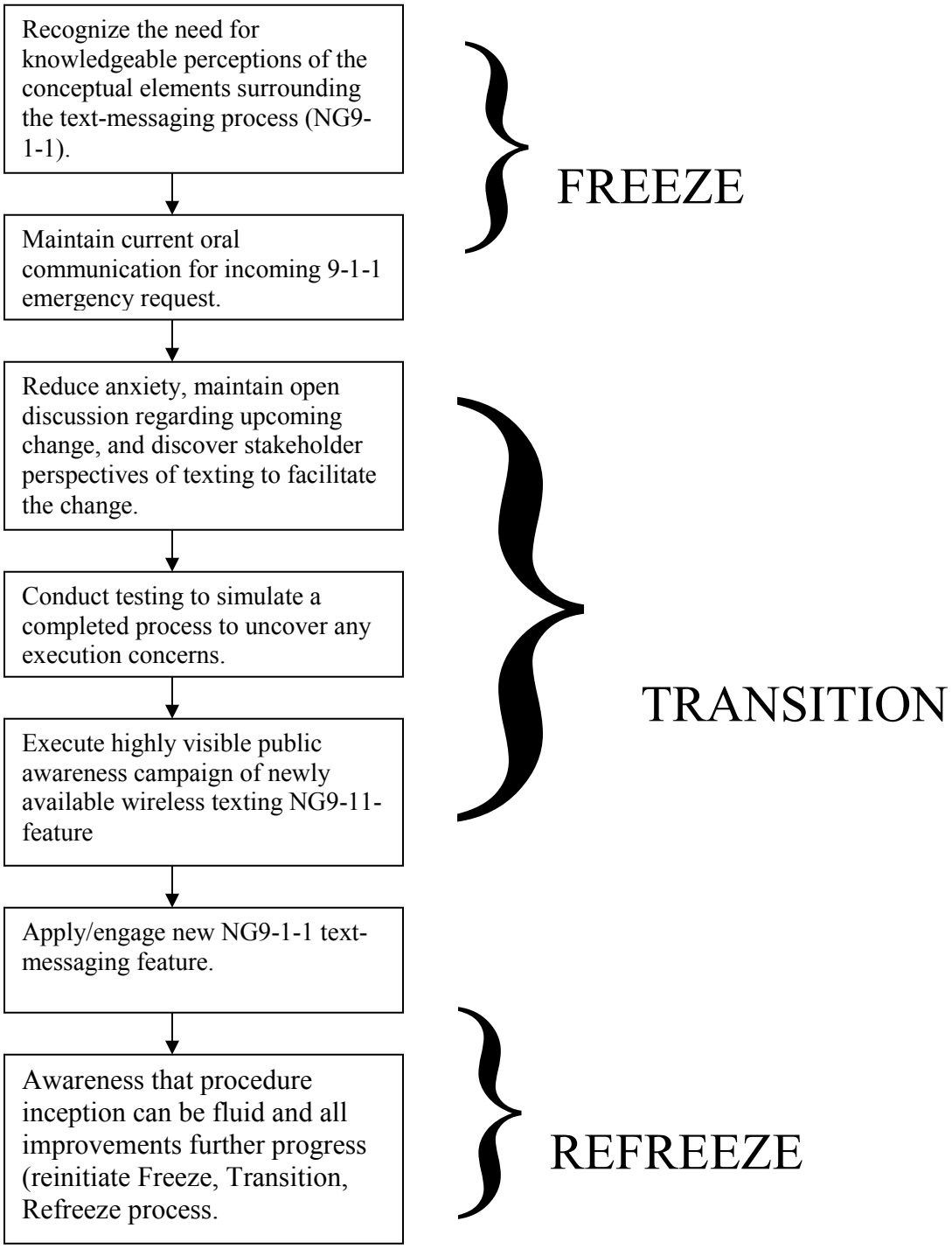

Figure 6. NG9-1-1 Wireless device texting change model. Adapted from "Field Theory and Learning" by K. Lewin, 1942, Chicago, IL: University of Chicago Press, p. 215.

Summation

Word meaning, acceptance or rejection, influences an individual's conceptions, interpretations, perceptions, and cognitive abilities. Communication styles, processes, strategies, and practices (Cheng & Seeger, 2011, pp. 64-65, 69) actively managed in conversation systematically differs from communication existing in a text exchange form (Hutchby & Tanna, 2008, p. 161). As such the meaning one individual places in a word may not coincide with the intended word meaning. The assignment of meaning to words is very important to the art of communication. When viewing communication in such a manner, the systems theory approach is recognizable in that action or inaction based upon the meaning prescribed to a word by one individual will influence action or inaction by the alternate individual. While each action is separate, the interconnectedness defines the overall circumstance. Incorporating the wireless device text-messaging feature, within San Antonio NG9-1-1 emergency public safety reporting, introduces a new and unused communicative process in emergency reporting requiring a formal change-management process. Unidentified procedural processes addressing wireless device text messaging use in the SAPD Communications Unit's PSAP Standard SOP also pose a problem. In police public safety emergency services, the introduction of wireless device text messaging evokes a responsibility to understand conceptual elements of PSAP operations, oral and written language use, technological integration, wireless device text messaging, and change-management. The contextual awareness I supplied included academic literary contributions fundamental to the conceptual elements central to the phenomenon in this study. Oral communication language explorations for the use and understanding of

written language use to communicate public safety police emergencies epitomes the intricacies of wireless device text messaging introduction within NG9-1-1. Currently available scholarly findings relevant to the study's theoretical and conceptual elements provided the bases for the literature review as presented in Chapter 2. The literature review enhanced the discussion necessary for stakeholder consideration of how processes will change with the introduction of wireless device text messaging within the San Antonio PSAP. Academic and practical information surrounding the public safety emergency operations environment, technology, language use, text messaging, and change-management supported through previous research findings and literature regarding real-world business application arise through discussion. The gap in scholarly literature reveals a lack of discussion and debate surrounding the use of SMS or text messaging in a public safety emergency environment. Recognizing the gap can be the difference between life and death, deterring delays caused by confusion beginning, misunderstanding between the sender and receiver (Summak, 2014, p. 131). Effective information exchange being central for timely, efficient, and effective response from a call-taker during a 9-1-1 situation (Chandrasekaran et al., 2011, p. 733) can save crucial minutes and even seconds during emergency events (Ames & Busch, 2013, p. 80). My research findings aimed to fill an existing academic literary gap bridging wireless device text messaging use to emergency PSAP operations. A qualitative case study analysis was the conduit to collect the knowledge to fill the gap. The end means to be reached in the new introduction of wireless text messaging to the PSAP is the appropriate, timely, efficient, and effective response to police emergency requests, adhering to current policy

standards. Studying and discussing the elements central to the introduction of NG9-1-1 wireless device text messaging in a system-thinking approach the larger picture contemplates. Qualitative study methods influenced areas such as sample population, data collection, and data analyses and Chapter 3 continues with the underlying premise of strategy and extends the thought of strategy to the case study methodologies used to obtain data relative to the use of text messaging within NG9-1-1. Reaching findings regarding the relational merit of the study's main concepts as well as the underlying applicable theories requires a contemplative, informed, and analytical discussion.

Chapter 3: Research Method

Introduction

Personal attributes can be reflective in language use. Language use, an evolutionary process, is a product of an individual's exposure to origin, culture, upbringing, education, and experience; therefore, language use is individually unique and diverse (Cheng & Seeger, 2011, p. 69). Globalization spurs the continuous growth of unique language use diversity in a society (Heil, 2016, p. 2). By considering how the oral language use, as well as oral communicative characteristics and mannerisms, are presently distinguishable in E9-1-1 police public safety reported emergencies, this study's findings can provide insight, reflection, and guidance on how progression to written language use, within NG9-1-1, via the wireless device text messaging application may change E9-1-1 stakeholder's processes within NG9-1-1. Excogitation may enlighten stakeholders to any transitional propriety that may be required in the newly introduced text messaging practice.

The purpose of this qualitative case study was to explore the use of written communication via a wireless device text message for citizens to report an emergency to the police. The study included using E9-1-1 calls as a relevant form of producing knowledge (Marti, 2008, p. 1) to gain understanding of the shared communication between the call-maker and the call-taker. By learning how oral communication interaction currently exists provided insight into the potential transition to written communication and text messaging use during NG9-1-1 emergency reporting. The need to understand changes prior to the activation of the text messaging communication

method for reporting emergencies supports dispatching help to the emergency incident as quickly as possible.

Theoretical worldviews enhance a research inquiry. The design and method used when studying a researched phenomenon is endorsed by the nature of the inquiry; therefore, methods became as much to do with philosophical choices as technical choices (Bryman, 2008, p. 160). Chapter 3 in a dissertation presents a credible justification for the type of research method undertaken in support of the research questions and offers contrasts of opposing viewpoints of the research methods befitting a scholarly research design. Due to levels of individualism perpetuated in language use, a qualitative case study approach was beneficially suited to the exploration of uniqueness (Cooper & Morgan, 2008, p. 159); the qualitative case study approach is gaining increasing credibility as a suitable research methodology by offering a creative and credible approach to help underpin contemporary practices (McGloin, 2008, p. 45). In the following sections in Chapter 3, I elaborate on the specific methodology employed in the exploration of wireless device text messaging use for NG9-1-1 emergency reporting. I aimed to endorse transparency in the research detailed process.

Research Design and Rationale

Early on during my doctoral studies, Dr. Collins advised me to gravitate toward a dissertation topic I was familiar with that held my interest and was possibly something in the area of my employment. As a public service practitioner and a researcher, my thoughts of a research topic centered on and revolved around the phenomenon of NG9-1-1 within the San Antonio PSAP operation. I deliberated long and hard regarding the main

underlying question that I believed I should research with respect to future application changes in the emergency reporting process. During my development of a central research question that guided my study, I conscientiously reflected upon the proposed use of wireless device text messaging as a method for citizens to use to report an emergency. The concern of what would be beneficial for stakeholders to know about the change process with respect to the transition of citizens using written communication to make an emergency report remained foremost in my thoughts.

No two individual's use of communication will be identical and "effective communication does not happen automatically" (Jorfi & Jorfi, 2012, p. 2). Individuals learn, choose, and execute ideas, processes, and procedures in their communication and communicative patterns highlighting and reflecting their personal and unique VABES (Mento, Cougnet, & De Vader, 2012, p. 51). As such, language use is ingrained and imposed with personal attributes and the use of language between individuals can become distorted (i.e., a sentence or word can have varying meanings in varying contexts; Jorfi & Jorfi, 2012, p. 2). NG9-1-1 advances the wireless device text messaging feature for citizens to report and request assistance pertinent to police, fire, or medical public safety emergencies (NENA, 2013, p. 1); the use of written messaging capabilities in the emergency reporting environment is a change from the current oral communication process of reporting emergencies. The change processes I have experienced as a COSA employee contain bias, as unfortunately the historical record of change initiation within COSA is questionable. My professional and personal experience of the less than successful COSA change transitions initiated during my city career were due to the needs

of the stakeholders not being met. As a student of public policy and administration, in addition to possessing an organizational management education, I believe successful change transition must involve and include stakeholders directly related and engaged in the process as a means of understanding and acknowledging the components central to the change. Hence, my Level 3 leadership practices of motivating and committing to higher performance concerns focusing upon below the surface attributes such as influencing the thinking and feeling of others, strategic thinking, ethical behavior, human behavior, managing energy, and the understanding and applying of principles personally and in a group (Clawson, 2009, pp. 470-475).

Therefore, the central research question emerged regarding the understanding and discovering of "How might wireless device text messaging communication impact San Antonio PSAP stakeholders and public safety emergency reports for police response?" The knowledge that I garnered through research of the central research question filled a gap in knowledge bridging text messaging use and emergency reporting, Simultaneously, the central research question contributed to the study's purpose by centering upon what needs to be known about the phenomenon and why. To assist in creating a developing structure to the study, as well as distinguishing a hierarchal thought level, identified subquestions for the study included "How does an emergency report for service influence communication? How does communication influence an emergency report for service? How might emergency report initiation and emergency response interaction engage when emergency reports exist in a wireless device text-message format? How can the change process be orchestrated in efforts to influence successful transition involving text

message initiated reports for emergency response?" Comparable to the central research question being predominant to the study's inductive discovery, supporting research subquestions are as critical to the study's exploration. The research questions stressed the importance and solid foundation forming the basis of the research (Marti, 2008, p. 3) and ensured that a personal parallel to the conceptual framework emerged in this study.

In light of the current gap in the literature, an exploratory research was suited to gain knowledge surrounding the use of wireless device text messaging within NG9-1-1. A qualitative case study method of inquiry incorporated the study participants' perspectives surrounding their participation within the emergency reporting process. The study participants' input regarding experience with wireless device text messaging was instrumental for exploring and extracting data to assist in discovering how reporting emergencies will segue between oral language and written language communication via wireless device text messaging (i.e., SMS). In the qualitative exploratory case study inquiry, I anticipated observing current oral communication practices in the San Antonio PSAP environment; the methodology ideally created a study where the realistic portrayal of the studied phenomenon took place in a natural setting. Consideration of the types of evidentiary support I would have access to enter into the case study methodology. In addition to collecting data through observations, additional data collection methods included interviews with the study participants, 9-1-1 taped recording reviews (taped recordings surround the oral communication between citizens and police call-takers), and review of radio transmission between police dispatchers and police officers responding to the reported emergency. Each data collection method assisted the exploration and

discovery of how stakeholder interactions would translate within a wireless device text message (application) environment.

In research, a philosophical formulation influenced by a scientific school of thought must also be present in the methods and methodology (Bryman, 2008, p. 160). Through reflection and strategy, I thoughtfully and consciously considered the academic and practical link between the problem statement, purpose, research questions, and conceptual framework to shape the study. The police department employees' public servant empathetic nature in me concerns the use of the tool by the citizens so that the technology does not hamper actions of reporting an emergency but instead enhances the experience. A friend of mine relayed a story to me of a young woman involved in a single motor vehicle crash and the injury sustained obstructed her ability to speak. The young woman was able to use her wireless device and sent a text message to a personal police officer friend of hers in order to summon assistance. As previously asserted, the abbreviated use of text messaging is informal and personal (Hart, 2010, p. 6) and the utility within emergency reporting must be studied to ensure all parties are well-versed and the change aspect of the phenomenon is introduced as an effective tool needed to reach a mobile society. The beginning researcher in me sought to understand how an individual's choices affect the phenomenon. For example, how word (or symbols) interpretation is similar or different? What influences a message? How do individuals interpret words? How does surrounding context affect meaning? The various aspects in using wireless device text messaging in emergency reporting reflect problematic and complex relationships suitable to the case study approach (Stake, 2013, p. 10) and the

findings from the study provided missing detail in literature as well as add to realistic business dilemma.

Worldview

A perspective, in the form of a worldview, purports additional strategy in this study. A worldview, or paradigm, incorporates a natural philosophical underpinning (Bryman, 2008, p. 159). The paradigm surrounding language use and interpretation within the orientation of communication is rooted in unique individual and societal characteristics such as thought, perception, ability, and understanding (Blitzer, 2010, pp. 913-914). VABES and memes (habits, skills or behaviors passed from person to person by imitation; Blackmore & Bradie, 2000, p. 42) frame the idea of how and why individuals know the meaning of words. Epistemologically, the perception of communication assumes a constructive process between the communicating parties as an activity of cooperation, dialogue, and exchanging ideas (Liu & Gao, 2011, p. 117). Therefore, a myriad of questions and considerations surrounding knowledge and the theory of knowledge enter into the study's exploration of text message communication using many sources (Marti, 2008, p. 2). This study was an effort to gain awareness of written language use and texting characteristics, available in literature, and perceptions of the study participants unique to an emergency reporting scenario. The endeavor to root the idealized conditions in research in order to gather evidence construed of individuals' worldview beliefs strives to transcend a change-management dilemma through the application of systems thinking to bridge academic and practical factors (Blow, Davis, & Sprenkle, 2012, p. 13).

Constructiveness

The uniqueness of individuals further concedes that not all individuals will respond to the complexity of a phenomenon with the same thoughts, beliefs, actions, and reactions. Therefore, through research exploration, constructing what citizens and police personnel may encounter when reporting police public safety emergencies switches gears to include wireless device text messaging as a viable communication mode is an opportunity to further enhance understanding through critical thinking. Similarities, but mostly contrasts, of the meaning of the impending NG9-1-1 phenomenon produces radical thinking in the pedagogic mainstream (Meyer, 2008, p. 332) where understanding and reality is an element of constructivism. Thinking creatively, in the manner that phenomenon exist on multiple levels of knowledge, existence, and subjectivity, is the key to drawing inferences regarding the interrelated concepts defining the phenomenon as a whole (Wu & Lin, 2009, p. 912). Therefore, it is with a defined shape and development within unique, historical, and societal context that an understanding of human idea and knowledge assists in construction and philosophical exploration in a subject (Meyer, 2008, p. 332).

Language, an example of a mimetic approach and evolution, resulted in social utilization of word sound, meaning, and use (Blackmore & Bradie, 2000, pp. 43-44); therefore, the constructive meaning of language adds to the overall conceptualization of this study. A lack of word sound, absent in the use of a TTY/TDD telecommunications device for the deaf, is a known experience to some police call-takers; however, the potential wireless device text messaging use in a wider society warrants additional study.

A study engaging the stakeholders' (i.e., the study participants') perception of their oral language use and wireless device texting experience aided in inductively conceptualizing a foundation of how NG9-1-1 Text-to-9-1-1so that the initiation process of an emergency report may unfold. Constructively uncovering and learning the study participants' multiple perspectives, meanings, and understandings of the complexity of the anticipated NG9-1-1systems-thinking interrelated reporting processes provided a structured meaning of the phenomenon. The gained knowledge obtained through the study exploration further enhanced understanding of the technology-driven process as well as provided a roadmap of appropriate and profitable actions to use during the change.

Case Study

Police public safety, emergency reporting, written language use, wireless device text messaging, technological advancement, and change-management reflect complex, situated, problematic relationships and operate in real situations (Stake, 2013, pp. 3, 10). Through qualitative research, I strived for a better understanding of the subject matter at hand (Denzin & Lincoln, 2008, p. 5). Through a case study inquiry, a holistic and real-world perspective (Yin, 2014, p. 4) revolving around text messaging use and an emergency reporting environment engages relationships through the collection of a variety of empirical materials that describe routine and problematic moments and meanings in individuals' perspectives of emergency situations (Denzin & Lincoln, 2008, p. 4). A dynamic qualitative case study (Stake, 2013, p. 3) uses interpretative and material practices to make a world visible (Denzin & Lincoln, 2008, p. 4) into a human

behavioral condition to realize a social situation beyond closed-ended quantitative research.

Data collection throughout the cases of the emergency response processes contributed to exploration and critical inquiry. Observations of police call-takers during active E9-1-1 calls provided relevance to assisting the caller and interaction with the police dispatcher; the actions enforced the case study inquiry because the cases reflected real time occurrences in society (Stake, 2013, p. 3). The involved call process extends to the subsequent actions shared between the police dispatcher and the police officer and culminating with the police officer and citizen interaction. In addition to observations, the interviews, 9-1-1 calls and radio recordings, documentation, and police report physical artifacts strengthened and supported the case study inquiry due to the full variety of evidence (Yin, 2014, p. 12) for triangulation. The participants' perspectives towards wireless device text messaging played a role in the assembly of the interlinking of the conceptual elements present in this study's phenomenon. Case studies denote and present a sense of history and future (Stake, 2013, p. 3). From such a case study research perspective, the informing practice (Cooper & Morgan, 2008, p. 159) results from the effort of linking the collected data within a knowledge generating amplitude.

Genuine E9-1-1 stakeholder interactions constructively recreated and depicted the cases salient and exemplar of real-life occurrences. The usability of direct observations, E9-1-1 call recordings, police radio recordings, E9-1-1 ordinance and authorization documentation, police department SOP, and informal study participant interviews as the research tools exhibit the rigorous methodological path (Yin, 2014, p. 3) for the

qualitative case study exploration. The case study research methods reflect an attempt to secure an in-depth understanding of the phenomenon (Denzin & Lincoln, 2008, p. 7) to inform the actual occurrence. Through the method of classifying each datum according to a categorical theme (Stake, 2013, p. 89), holistic impressions regard the importance of communicative patterns inherent in emergency reporting. Theme producing findings help to get a better understanding of the subject matter at hand (Denzin & Lincoln, 2008, p. 7). Therefore, by employing a case study strategy, an individual unit of a received and dispatched emergency report can dissect to reveal how stakeholders' communicative actions influence the reactions reciprocating from participating stakeholder interactions. The qualitative case study methodology services the exploration into the use of NG9-1-1 wireless device text messaging. Fundamental insights−into the social phenomenon− exposed a foundation of how texting as the initiation of the emergency report, in a written format, may unfold in the processes introduction during NG9-1-1. By compiling and deriving knowledge through the stakeholders' (i.e., the participants') perceptions of current orally initiated emergency reporting, insight and understanding of the use of texting as the chosen method to communicate an emergency report were construed.

Role of the Researcher

The role of the researcher must critically manifest through responsible engagement in multiple active functions sustained throughout the study. For my intended research, my functional role through observation was to collect E9-1-1 case relevant information noting reactive actions by police call-takers and within communicative interaction. Field observation data captured police call-taker facial expressions, physical

gestures, or speech inferences such as hesitations, follow-up questions to received information, and requests for assistance from other police PSAP personnel. Using interview skills, I collected the participants' perspectives of their experiences through the asking of strategic interview questions fundamental to the research questions. With investigative prowess, I examined and reviewed literature and physical artifacts central to the emergency reporting process to nourish the research project. Primary to providing enlightening scholarship through narration, presentation, and documentation, my role included sharing the transparency of this study with the audience. The transparency disclosure includes reporting my "positionality as immersed within the organization under study" (Marti, 2008, p. 3). As an insider, an elevation of familiarity and a conscious level of investiture displays in the research and enhances the study substance. However, by no means does it infer that an academic cannot knowingly research and present a phenomenon where practitioner intimate knowledge and experience is not available. However, personal experience, knowledge, personal or professional investment, passion, and concern strengthen the case presentation.

Inside Inquisitor

While SAPD General Manual policy and SAPD communication unit SOP document PSAP operations in the San Antonio government, human nature and human behavior transcend written policies and ordinances. Society recognizes texting use; however, texting is a product of individuals and can be as individualistic. What is yet to be researched is what the stakeholders directly involved in the emergency situations will possibly encounter through the engaging and merging of emergency reporting and

wireless device text messaging (Racifi & Dagger, 2010, p. 104). Introducing wireless device text messaging technology into the oral communication dominated PSAP environment was an opportunity, for me, to think of and help others contemplate and understand how the inclusion of texting into the emergency call-taking scenario may evolve. I was emerged in the PSAP culture due to my *inside* employment status in the SAPD in addition to a lifelong servitude to the public as a 32 1/2-year veteran with the COSA local government. When the researcher is a participant in the culture studied, an emic or insider perspective results (Nguyen & Yang, 2012, p. 384). Denzin and Lincoln (2011) expanded upon (insider) qualitative researchers being committed to an emic position "which directs their attention to the specifics of particular cases" (p. 9). Subjectivity encroaches an emic accounting and as a cultural insider the spoken words or speech hesitations, facial and physical gestures, reciprocal requests for clarification or additional information, and other positive or negative interactions through visible means I encountered during the observation and interview processes were subject to description by someone familiar with the emergency reporting process. An emic accounting can further distinguish only those meaningful and appropriate characteristics from within the studied culture (Nguyen & Yang, 2012, p. 384). An emic construct can also materialize during data collection and analyses involving physical artifacts, recordings, and documentation reviews by unconscientiously targeting police lingo.

My business role in SAPD did not involve immediate or intermediate supervision of any SAPD staff though my business office was located in the 9-1-1 call center (i.e., PSAP). My contact with all the study participants was strictly as a student-researcher and

not as a police department employee working in an official capacity. I am cognizant of the basic issues of social research surrounding the distance between myself, as the researcher, and the participants (Marti, 2008, p. 2); the research is relative to the my workplace environment and a professional semblance ensured research measures remained objective throughout the study's data collection interaction with the PSAP volunteer study participants. Intrinsically and instrumentally (Stake, 1995, pp. xi, 3-4, 7), the research case studies, at the micro level, reflect the intimacy of the phenomenal complexity. I was concerned to explore communication's influence in what the citizens and police personnel may confront due to merging wireless device text messaging within the emergency processes. The big picture change-management processes study lent insight to policy implications. My role as a SAPD employee and researcher was to accumulate existing academic literature addressing transitional knowledge by and between oral and written communicative modes in order to assist, advocate and promote the NG9-1-1 wireless device text-messaging enhancement.

Storyteller

As the person responsible for relating and informing others, I must convey the engagement of the emergency reporting process from the participants' (i.e., stakeholders') point-of-view. The stakeholders' actions pertinent to the delivery and reception processes within the PSAP operation provided insight pivotal to the glimpse and understanding of the emergency process; acknowledgement of the stakeholders actions are critical to the story and assisted in building a realistic setting. In addition to shaping a setting, as the storyteller, I related the participants' perspectives and built a plot

in anticipation of conveying a significant story to provide meaning (Kimmell, 2013, p. 2) to the audience. By fashioning a realistic scenario, the intricate relationships among the stakeholders portray the importance of the process interactions. The audience further received illustrative insight into the story setting through the description of current communication patterns inherent in actual emergency reports as a means of gaining foreshadowing of how a citizen initiated SMS communication may play out when written wireless device text messaging substitutes for oral communication.

The ending of the story concludes with the presentation of the collected evidence through reported findings built upon the pivotal theories and concepts of the study. As such, I affected the study by equipping the reader with phenomenon knowledge as well as why that knowledge is important to the societal phenomenon. As the storyteller, and as an employee of the police department, I hoped to arm the stakeholders with insight pertinent to the integration of wireless device text messaging into current business operations, citizens' actions, and policy amendment. The underlying innuendo is rather than the direction of here is a new toy to use now go figure out how to use it on your own instead a deliberated and organized method to the NG9-1-1 text messaging feature is strategically introduced, planned, and guided when stakeholders use a collaborative approach to the situation-at-hand.

Concept Coordinator

I presented the dissertation document in an approach where the theories and conceptual elements represented an accumulation of coordinated and organized intertwined components. Through the study of the simple elements (Flood, 2010, p. 269)

and quality criteria (Marti, 2008, p. 3) of the relative theories and concepts in communication (both speech and texting), emergency reporting, police public safety services, change-management, technology, research methods, and research methodology valid knowledge and meaningful study emerges to build a complete picture (Flood, 2010. p. 270). The coordination of the phenomenon elemental quality also contains the perspectives of a study population in position to assist in deriving a response to public needs. The final coordination culminated in my presenting evidential findings to provide the reading audience with a visualization of a holistic experience regarding the phenomenon in this study. Likewise, I intended to generate a familiarity where the readers were able to develop a point of view from the citizens', police call-takers', police dispatchers', and police officers' perspectives as well as provide a rationale pertinent to how the theories and concepts exist in unison.

Investigator

Ph.D. candidates, as researchers, adopt, develop, and use investigative techniques and skills that highlight dissertation proceedings in order to perform academic inquiry of societal phenomenon. Showcased through the literature search, the participant inquiries, field observations, and evidentiary documentation, my techniques extended to ensuring the collected data accurately reflected uncovered and discovered evidence throughout the investigation. Reading, interviewing, seeing, hearing, and finding the multiple and at times unending aspects contingent in the case study instigate the continued path leading to full academic and practical phenomenal substantiation. Active discussion and debate with fellow organizational members, outside the PSAP environment, as well as scholarly

mentors and colleagues furthers the research quest for comprehensive and concentrated scientific knowledge (National Academy Press [NAP], 2009, p. xv). The inductive disclosure of the conceptual elements elementary to the qualitative case study present for full deliberation through the exhibition of the data pertinent to the use of wireless device text messaging as a CCM practice.

Obligation

Obligation placed not only a challenge but also a burden upon me to report and record the corroborating as well as dissenting academic knowledge and perceptions from various viewpoints permitting the advantage of informed decision-making. Accepting the overwhelming and challenging endeavor (Burian et al., 2010, p. 43) can conclude in a fulfilling sense of accomplishment that as a student of the sciences your contribution situates among the literary body of knowledge in academia. Thereby, as a responsible person in society I can speak to induce significance worthy of contemplation. As a local government employee, I feel a sense of duty in bringing to light such thoughts regarding change; change conducted through supportive collaboration among stakeholders in an effort and design to ensure lines of communication do not digress and partnership ventures with citizens prosper.

Confirming, conflicting, complete, credible

Gathering research evidence can proffer multiple viewpoints, perspectives, understandings, possibilities, and outcomes. Therefore, I must be academically meticulous when pursuing a case study where my individual contribution and choices may influence the reader. The need for methodological precision to enhance the solidity

of the discussion, debate, and reliability of the findings was essential (Iacono, Brown, & Holthman, 2011, p. 57). Methodological rigor in the literature review dictated a thorough search within the current body of knowledge and a responsibility to inform the reading audience of not just the confirming but the conflicting relevant information in relation to some ... theory (Cooper & Morgan, 2008, p. 160) or concept influential to the research phenomenon in this study. Yin (1981) asserted that by "building a case study on a clear conceptual framework the pitfall of possible lengthy narrative, no predictable structure, difficulty writing, and difficulty reading may be avoided" (p. 64). My integrity should be transparent through complete and competent informing to the reading audience. Integrity is also appreciable in posing to the readers' contemplative substantial material to form and gain philosophical practical and relational bridging of the theoretical and conceptual ideas to the phenomenon in this study. Credibility displays through the soundness, integrity, and tenability of the imparted facts relayed in the author's story. Dissertation candidates must feel obliged to conduct and render scholarly concise research and reporting to themselves, the academic community, and the intended audience that can prosper from the study.

Architect Orchestration

A dissertation research study requires an orchestrated architecture in anticipation of accomplishing a multifaceted and complex endeavor. The research design entails "the logic and coherence components of your research study and the ways in which they relate to one another" (Maxwell, 2005, p. xii). Further elaboration would insist that in addition to the research design, the research approach and applied methodology must exist in

concert with each other. In addition to the research design, approach, and method interconnection, the problem statement, nature and purpose of the study, literature review, central and subquestions, data collection, data analyses, and relaying of the reported findings must also fit together in an interlocking and conjoining manner for a sturdy composition. All the while, as the author relates the studied phenomenon, the thought that the authors writing must continuously capture the audience's attention through trust and participation (Kimmel, 2013, p. 7). The narration must have a large measure of resonance in the storytelling to send and receive the social importance of the studied phenomenon.

Strategy

Strategy requires knowledge of the big picture and engineering a scheme to progress forward in a project to arrive at desired results. A strategy should be realistic. Taking a critical look at the social phenomenon, forming a central research question, and conducting a precursory literature search are realistic preparations to developing a strategy. In a research project, another beginning strategy step is deductively determining if a quantitative, qualitative, or mixed methods research study is most appropriately suited to postulate a penetrating probe into the possibilities surrounding the research questions. Quantitative research primarily includes the collection of evidence placed into a numerological organization, for measuring, to respond to the phenomenal probe. A quantitative inquiry may provide useful information regarding closed-ended responses associated with texting via wireless devices; however, a yes or no response pertinent to using texting for emergency purposes would not adequately respond to the central

research question formulated for my intended research. A qualitative research study, which I would personally characterize as touchy feely, into the phenomenon of NG9-1-1 wireless device text messaging delves deeper into the humanistic behavior of how, what, and why and generate new knowledge to integrate with current knowledge to develop more value (Wu & Lin, 2009, p. 911). A qualitative research inquiry, in broader terms (Andrade, 2009, p. 42), can beneficially enhance the proposed exploration into wireless device text messaging use specifically in emergency reporting, as the San Antonio PSAP has not progressed into the NG9-1-1 feature enhancement. A mixed-methods inquiry may prove to be beneficial in the future after the establishment of NG9-1-1 wireless device text messaging and data is available regarding the actual use of text messaging within the PSAP environment. Future research, in the form of a mixed-methods study is also valuable for continued policy inclusion and advancement. The strategy remains that the research questions guide the research approach.

Emergency Reporting

Surrounding context influences meaning. In this research study, I shared situational contextual awareness relevant to the study. Through information sharing, the study audience constructively receives, builds, and increases knowledge. Situational contextual awareness applicable to this study is important for audience story-building perception but more importantly necessary to further tenability and verifiability in this study. Therefore, my responsibility included providing knowledge and situational awareness surrounding the study's physical environment, relative scholastic literary contributions, and discussions pertaining to the conceptual framework and theoretical

ideals so the study's meaning and message will portray contextually. By examining the current San Antonio PSAP call reporting occurrences, stakeholder interaction exposure assisted in achieving a better understanding of the communicative context a through the participants' experience (Hammer, 2011, p. 162). Reporting emergencies to the police is a process worthy of studying on many levels, the most prominent assertion being the emergency report can include a life or death circumstance. My case study engaged criteria through emergencies reported by citizens and received by the police call-takers. Factors ranging from emotions to after-action reports were critical to the study and supported how communication influences emergency reporting and how emergency reporting influences communication. The end-result of emergency reporting is to ensure safety remains the critical component enveloping the possible life-threatening circumstance. As such, influential properties such as reporting emergency actions and the use of text messaging in this qualitative case study added enrichment to the contextual discussions that may enlighten wireless device text messaging use in San Antonio NG9-1-1.

Answering Point

The San Antonio PSAP is an assembly of separate but related operational groups and the emergency reporting progression is a myriad of linked group and individual interactions where working relationships merge. The use of advanced technological systems also ties the operational groups together. With the advent of wireless device text messaging launching as a useable feature within NG9-1-1, group and individual interactions and relationships will deviate from the current *norm*. Changes to the current

operational *norm* include the use of written communication versus the use of oral communication in the citizen and call-taker interaction. Noted changes with the initial group relations can progressively alter group and individual interactions and relationships throughout the emergency reporting process. Another *norm* deviation includes the police call-taker conducting communication, with the citizen-caller. By observing live E9-1-1 calls within the PSAP environment, I related group and individual interactions and relationships occurring in the setting. Current E9-1-1 operational encounters informed as well as fostered the exploration of wireless text messaging use. PSAP access was a necessity for me. Relaying contextual awareness as observation (Rosenbaum & Jiang, 2013, p. 888) to collect data during the process and progress of an E9-1-1 call and emergency reporting actions was fundamental to the study. Academia steers the collection of contextual and documented scholarly literature imparting knowledge of emergency reporting, written communicative mechanics, and wireless text engagement. Practicable working knowledge of the PSAP operations enhanced integration of the material supporting the operational experience.

Visual

My visual observations of body language, facial expressions, and other physical activity, displayed by police call-takers and police dispatchers become analytical evidence (Rosenbaum & Jiang, 2013, p, 888); visual observations can include PSAP employees sharing written information via the CAD or passing key card information between the police call-taker and the police dispatcher. The descriptive narrative of activities in the PSAP by describing the police call-takers conduct during emergency

reporting processes created an enhanced meaning of the setting to the reading audience (Gonzalez & Fenske, 2012, p. 38). Accessing administrative and operational documentation additionally supplemented contextual assessment. Administrative and operational documentation elicited necessary background and procedural content necessary to present environmental representation of organizational culture in the PSAP emergency operation. Visual observation of the study participants during the interview stage also lent supporting knowledge for appraisal within the PSAP operational processes.

Audio

Information sharing increases shared contextual meaning. Audio, as a recognizable element contributing to contextual awareness support and supplement visual observational activities (Hervas, Bravo, & Fontecha, 2011, p. 410). While on-site at the PSAP, audio in the present tense of the one-sided E9-1-1 conversation between the police call-taker and the incoming caller became observational data as well as any aside communication influenced by the incoming E9-1-1 call. As the incoming call detail transpires from call-taker to dispatcher, the dispatcher will in turn contact the responding police officer and vocally relay any incidental information additionally relative to the emergency report. The vocalized communication between the dispatcher and field police officers captures on tape and the examination of the recorded proceedings become pertinent in the context of situational awareness. Increasing the contextual awareness was the archival E9-1-1 tape recordings and radio transmissions between police dispatcher and police officers in addition to any subsequent radio communication between police

officers. Oral communications between the field officers and citizens convey through the police officer interview process and acquisition of the written police report, barring privatization regulations.

Public Contact

When calling in a police emergency request, the citizen's first contact with police emergency personnel is the responding police call-taker. The initial communicative interaction between the private citizen and the police call-taker is the beginning action setting the emergency reporting process system into motion. Citizens' perspectives of their experiences in placing an E9-1-1 call, as well as their experience with using wireless device texting, was vital to achieving a full awareness of a systems thinking phenomenon. Through the completion of interviews, the words gathered from the citizens, as well as police call-takers, police dispatchers, and police officers, of their perspectives aided in developing a realistic police emergency reporting communicative scenario. The accumulated in-depth perceptions, from the private study participants, added valuable and knowledgeable experience to the emergent study findings. Solicitation of citizens' perceptions regarding the use of wireless text messaging as a CCM for the initial delivery format added an additional level of depth to the proposed NG9-1-1 Text-to-9-1-1 emergency reporting processes.

Responder

Completing the perspective of the emergency communication cycle involved obtaining the viewpoints of the police personnel directly involved in the relaying of information pertinent to the emergency call cases comprising this case study. Police call-

takers receive initial emergency request information from the citizen and in turn relay vital response information to police dispatchers. Police officers, in the field, receive vital emergency response information from the police dispatchers. The emergency personnel's thoughts regarding the emergency communication cycle as well as how wireless device text messaging may integrate in an emergency call situation is necessary to learning how the progression of communication may change when the received emergency report is in a text-messaging format (Kernstock & Brexendorf, 2009, p. 390). Including the responding police officer, in the field, as a study participant, created a perception of the emergency based upon the written and verbal communications received from the police dispatcher. Responding police officers making contact with the citizen reporting the emergency call added an additional dimension to reported call progression that assisted in evaluating communicative properties in an emergency and public safety service orientation. Therefore, when the police officer encounters the incident reported as the emergency and encounters the citizen who placed the call to E9-1-1, the derived understanding of the situation offered by the police officer through the interview process yet again added dimensional intensity to the creation of contextual awareness (Yonas et al., 2011, p. 220) surrounding the case study.

Sample Population

Studied in the natural setting, human nature and human behavior occurring in society produced authentic and analytical data to assist in the phenomenal interest focal to the intended research topic. To meet the goal of exploring unique situations (Burian et al., 2010, p. 52), the police call-takers, police dispatchers, police officers, and citizens

served as a population distinct for examining orally communicated emergency reporting as a means of exploring the proposed use of wireless text messaging in the emergency reporting arena. The sample population consisted of individuals possessing experience and actual knowledge of transpirations unique to the emergency reporting process in addition to wireless device text messaging. Through the purposeful sampling of using emergency cases called into the San Antonio PSAP, the studied events encompassed multiple individuals, as subjects, linked within the emergency reporting communication chain as a means to collect the perspectives of different actors (Yin, 1984, p. 31). With the aim to generate data from the study participants that mirrored behaviors in real emergencies and drew from experiences in the operational environment (Ash & Smallman, 2010, p. 204), the sample size, for my study, consisted of four independent cases representing the four San Antonio PSAP personnel shifts comprising a 24-hour workday.

Selection Process

Structure and strategy factor into the research selection processes. Selecting people, settings, events, and processes (Maxwell, 2005, p. 87) that will representatively align research components and build the context of the study pertinent to the research phenomenon entails a systems-thinking approach. A systems-thinking approach addressed the conceptual interdependence in the selection process as well as supported the systematic examination and exploration required for an inductive study. Defining the unit of analysis in order to identify the criteria for selecting and screening potential candidates, by using the relevant variables of interest, was an important factor in case

study research (Yin, 2003, p. 3). The main setting instrumental to the research was the San Antonio PSAP operational environment. Police call-taker shifts cover a 24-hour workday; shift periods are 0700-1500, 0700-1700, 1300-2100, and 2100-0700. One incoming call report from each of the four call-taking shifts comprised the four call reports examined in this study. The chain of communication present in the emergency reporting process is the sequential order of citizen to police call-taker, police call-taker to police dispatcher, police dispatcher to police officer, and police officer to citizen. The study participants were the four police call-takers, four police dispatchers, and four police officers responding to each of the four independent cases. A minimum of 6 months work experience within the San Antonio PSAP operational environment was required for police call-takers and police dispatchers in order to volunteer as study participants. Applying a criterion reflective of work experience was a perimeter set by me to ensure the PSAP personnel completed the initial city-employee probationary period because terminated probationary PSAP personnel have no appeal rights during the first 6 months of service. To meet emergency report study eligibility the incoming E9-1-1 call must be placed from within the incorporated boundaries of the city of San Antonio by a San Antonio resident 18 years of age or older, and communicated in the English language. Additionally, the reported emergency call does not involve a major crime against a person, and the call-maker does not declare to remain anonymous when reporting the incident. Recruitment of the four citizens volunteer study participants was conducted at four local shopping malls, representing the four segments of the city quadrants (i.e., north side, south side, east side, and west side) at or near wireless service centers. The selection

process applicable to the 16 potential study participants was consent and acceptance of voluntarily partaking in the study.

Qualities

Satisfying specific qualities, in a prerequisite fashion, intent is not to limit the range of data collected throughout the study. The prerequisites are solely stipulations for the interest of data collection maximization as the selection of a case or cases for study is one of the most difficult steps in case study research (Yin, 2003, p. 9). A needed characteristic for the potential citizen study participants included residing in the San Antonio incorporated city, personal use of a wireless device, and experience placing a 9-1-1 call; possessing a valid San Antonio residential address provided the initial knowledge of the citizens' availability later for the face-to-face interview. A second study characteristic, as previously mentioned, involved the incoming E9-1-1 call not involving a major crime such as murder, rape, or kidnapping. The stipulation for the emergency call report not involving a major crime category is to take a harm-reducing approach (Newton-Taylor et al., 2009, p. 966) for the intent of not subjecting the police call-taker, police dispatcher, and police officer to revisit a traumatic experience during the interview phase. Ensuring the police call-taker and police dispatcher have completed the initial six months employment probationary period increases the odds that the employee is accessible, as needed, throughout the study period. Qualitative characteristics likewise exist within the PSAP operational environment; therefore, as previously mentioned, the four chosen cases represented varied times throughout the day and should show to be representative of activity occurring within hectic and chaotic to less busy periods of

times. The underlying benefit of quality in addressing practical knowledge of the E9-1-1 big picture as a catalyst in understanding and describing correlative participants' activity and involvement in the processes can prove to be important in linking observational and interview data within the underdeveloped research subject (Gruber & Frugone, 2011, p. 491). Flexibility and reflexivity distinguish qualitative research and promotes synergy (Van Den Hoonaard & O'Neill, 2003, p. 309). Capturing synergy, through the incorporation of quality requirements, will support varied perceptions to ensure an optimal performance level for the delivery of academic, scholarly, and practical study findings.

Maximum Variation Sampling

The strategy of using maximum variation sampling, a form of purposeful sampling, resulted from a conscious cognizant deliberation epitomizing the study research questions. The purposeful selection strategy encompassed specific natural settings, participants, or activities particularly selected in order to present information more pertinent than through non-purposeful selections (Maxwell, 2005, p. 88). Replication logic underlies purposeful selection cases for in-depth study (Ganguly, 2013, p. 89) by maximizing the produced output from the variously employed data collection methods. Enhancing the analytical data to conceive a realistic inclusion of emergency reporting concepts offers a variety of information-rich cases that will likely produce maximum outputs (Jansen, 2010, p. 1). Emergency reports called into police call-takers bestowed a variety of possible and probable emergencies ranging from property crimes to misdemeanor assaults to vehicle crashes; therefore, the maximization of output

orchestrated by spreading the data collection observation throughout the PSAP 24-hour operational shifts. The examination and exploration into the proposed use of wireless text messaging in emergency reporting encompassed multiple perspectives from multiple stakeholders and the ultimate case study findings elicited a focused case-study inquiry.

Size

The four emergency report unit samples included police call-taker observations; interviews with call-takers, dispatchers, and police officers; and supplementary audio evidentiary support to supply and generate detailed and tangible evidence to support a knowledgeable discussion. Citizens rounded out the sample size and subject to data collection via the interview process. The qualitative study inclusive sample size reflected stakeholder interactions pertinent to a variety of calls received at the PSAP throughout a 24-hour period and included 16 study participants. The sample size is smaller than a quantitative sample size partially due to the qualitative research discerned as labor exhaustive. Individual and multiple group relationships inclusive of the communication chains in the emergency reporting process portrayed engaged communications that are profound, emotional, active, and substantial; therefore, analyses in a large-scale sample size can prove to be time consuming and often-impractical (Mason, 2010, p. 2). In the majority of qualitative inquiries, the sample size selected should adhere to the consciousness of saturation (Glaser & Strauss, 1967, p. 62). I endorsed the achievement of saturation existed contingent with my study's sample size. The case study exemplars requisite to capture the activity, emotion, profoundness, and substantiality of an emergency report was equally representative in content. My plan was flexible and

susceptible to amendment, if required, to ensure the sample size adequately represented an array of investigative and discernible data.

Data Collection

Data collection led to discovery. My use of data collection tools and processes led to the discovery of evidence pertinent to the perspectives of the participants' engagement in this study's phenomenon. The collection of data, leading to discovery, lied within the findings revealed and emanated by the study's actuated research questions. As a means of addressing the research questions (Maxwell, 2005, p. 92), the data collection methods merged to emerge as a holistic referential and contextual culmination of the evidentiary support data required for a knowledgeable and informed inductive reflection of a research subject. The qualitative inquiry to explore the proposed wireless text messaging use in the San Antonio NG9-1-1 environment incorporated multiple resources as were relevant to the case study (Anonymous, 2009, p. 91).

Understanding of the issues by investigating a variety of sources advocates the use of triangulation to endorse the credibility of the resulting collected data. Data collection supported this case study inquiry to explore proposed wireless text messaging use in the San Antonio PSAP emergency reporting center through five sources of evidence: documentation, archive records, interviews, direct observation, and physical artifacts (Yin, 2014, p. 12). Recorded emergency calls and radio communications; collected observable police call-taker and police dispatcher actions; face-to-face informal interviews; PSAP administrative and operational procedures; and police reports provided intersecting data distinguishable through the data collection methods to create combined

experiences the study participants shared. Data collection findings create new knowledge. As a catalyst for capturing researcher-thought, I maintained a data collection journal for supplemental purposes of supporting analyses findings.

Observation

The natural setting of the San Antonio PSAP was the background to collect the dynamic observable associative and residual action present during live E9-1-1 calls. The most important instruct in a qualitative case study is the conduction of the observation (Hashim, Hashim, & Esa, 2011, p. 20); I gathered observation data of the police call-taker being responsive to the incoming request for emergency service. The gathered observation data included a tri-lateral blend of active, reactive, and interactive audio and visual content. I took on a passive but flexible role during observation. Actions, verbal and non-verbal, are chronologically and systematically noted in a geospatial accounting (Onwuegbuzie, Leech, & Collins, 2010, p. 702) to enhance the activity, reactivity, and interactivity between the stakeholder's interconnectivity outward behavioral aspects. Using field notes, along with the additional collected data of E9-1-1 and radio communication recordings of the reported emergency, the extent of the full-range of the scenario reconstructs as further evidence of the study participants' actions. Taped or video recordings of the observations may be construed negatively and soliciting nervousness or a feeling of being rated for performance, by the PSAP workers, and was not considered as a supportive tool (Kaae et al., 2009, p. 36). Recreating the shared-approach (Gruber & Frugone, 2011, p. 491) was invaluable in the examination of orally

initiated emergency reports to explore transferable characteristics to a written wireless text communicative mode for reporting.

Interviews

Interviews served as an additional data collection technique. Face-to-face interviews were scheduled, conducted, and analyzed. Potential interview dates, times, and locations were offered to the study participants. The proposed interview dates were within a 15-day period from the observed emergency case exemplified in this case study's research. Police department employees received an internal business-delivered electronic mail (i.e., e-mail) correspondence from the my assigned Walden University e-mail address outlining the potential date, time, and location of the face-to-face interview along with details of the interview process. The citizens received a potential interview date, time, and location, and detailed interview process, via the cellular telephone number I acquired at the time of the primary contact with the citizen. Twenty-four hours prior to the agreed upon interview event, the study participants were contacted as a professional courtesy to ensure the study participants' schedule had not been interrupted. Offering the participants choices in scheduled interview times was a strategic move to defray any apprehension the participants may experience with the interview process; a predetermined prescheduled time may place an intended pressure on the participants. If too few police study participants resulted, I returned to the PSAP to recruit voluntary participants and observed new cases as necessary. If too few citizen study participants resulted, I returned to the appropriate recruiting point, as needed, to obtain the required number of citizen participants. Through the organization and hosting of the interview

events, the intention was to inspire a setting where the study participants gains a relaxed and comfortable predilection to share an account of a personal experience expressed in interview context (DeFina & Perrino, 2011, p. 2). The interview questions provided a stimulus to entice the participants' responses beyond a strictly descriptive account of the event towards event-inspired perceptions, comprehension, and presumptions to discover how wireless text messaging execution may represent within the emergency call event.

I took every effort to solicit unbiased viewpoints from those individuals in order to form an awareness of the PSAP operations in relation to emergency reporting and the proposed wireless text message use. Some of the police call-takers and police dispatchers may have work-related experience receiving emergency call information when the emergency report is received, at the PSAP, via TTY/TDD communication. In such cases, the solicited police call-taker perspectives will not bear upon the use of the TTY/TDD; however, the research would be negligent to exclude any previous knowledge provided by the police call-taker referencing the communication-cycle of a citizen's report received in a written format. Specific open-ended interview questions guided and maintained a discovery-oriented research study (Chenail, 2011, p. 255), however; the participants' offerings of any untendered comments became collected data. Audio recordings of the interview proceedings were not included as a data collection method. The decision not to integrate audio recording was to eliminate any fear of retribution on behalf of police call-taker, police dispatcher, or police officer study participants. The citizens' interviews process did not include obtaining audio recordings of the interview proceedings. All participants received assurance as well as received a signed agreement

from me that the shared experiences were strictly for data collection purposes of the research necessary for the Ph.D. dissertation requirements. An exit interview followed the study participants' primary interview where the interviewee had the opportunity to ask any final question regarding the research study.

Recordings

The archive recordings included the E9-1-1 incoming emergency call and the recorded police radio transmission occurring at the time of the emergency case study (Maly, Mikovec, Vystrcil, Franc, & Slavik, 2013, p. 1). The obtained archived E9-1-1 incoming emergency call consisted of the oral communication between the citizen and the police call-taker. The taped police radio transmission was the communication between the police dispatcher and the responding police officer in the emergency setting; the taped radio transmissions can also include communication between the responding officer and other officers or with a supervisor. Archived recordings supported data triangulation with the collected data from observation, interview, the case police report, and administrative operating procedures. The tape recordings I reviewed were in the sequential ordering of the time event happenings in order to portray a chain reactive scrutiny. The tape recording reviews took place after the participants' interviews to support an inductive-style examination. Patterns, commonalities, and differences detectable in the orally communicated information sharing between the stakeholders increase the knowledge of the shared event's reliability and validity (Marti, 2008, p. 3); detectable emotions were examples of valuable information contained on the tapes that will be relevant in this case study. The archive data recordings assisted in yielding

valuable information possibly undetected or unduplicated through other data collection techniques. Generated written transcripts of the tape proceedings served as supportive evidence within the findings.

9-1-1 calls.

The focus of exploring texting (a form of written communication) by examining the oral communications transpiring within an E9-1-1 call between citizens (call-makers) and police call-takers (receiver) included reviewing the taped recording of the emergency call. During the observation portion of the data collection phase, I noted the date and time of the incoming call and the call-taker console number. The quantifiable data served as search parameters (Jasso et al., 2009, p. 266) for the custodian's access of the emergency call related recordings. After submitting an open records request (ORR) through the SAPD Records Administration office, the communications custodian of records, located at the PSAP, searched for the taped recording, using the provided search parameters, by using the 9-1-1 Hindsight Time Gate G2. The 9-1-1 Hindsight Time Gate G2 is a standalone audio recorder for the PSAP phone and radio communications interfacing with the 9-1-1 Avaya System Database and the Cassidian Communications Computer Telephony Integration (CTI) Visinet/CAD Browser to authenticate audio of emergency requests and subsequent audio records. In the state of Texas, certain disclosure of private information is subject to exclusion. Originating telephone numbers and addresses considered confidential under the Texas statutes under section 552.101 as provided by Open Records Decision No. 649 (1996; Office of the Attorney General [OAG], 2014, p. 72) must be lawfully omitted from the recordings provided to me through the ORR. The

communications custodian of records saved the recorded call as an MP3 file to a share directory then burned the call recording on to a compact disc (CD) or minus client propriety information as outlined as privacy protection and nonpublic information. With the provided CD of the recorded call, I used the recording for data triangulation and analyses.

Radio transmissions.

Radio traffic recordings captured the oral communications occurring between the police dispatchers and the responding police officer. Additional radio traffic that can be captured, and relative to the case study, was the communication occurring between the responding police officer and other supporting responders such as fellow police officers, supervisors, other law enforcement personnel, or other governmental entity representatives, etc. The communications custodian of records followed a similar procedure as described for the E9-1-1 call extraction required to provide a CD of the recorded radio transmissions. A difference between the procedures is the Hindsight Time Gate G2 interfaces with the Exacom Radio System and the usable search parameters were the date, time range, and talk group cross-referenced with E9-1-1 call recording data. Obtaining a recording of the radio communication allowed for a case study correlation regarding the information the police call-taker received from the citizen with the information passed on to the police dispatcher; the information is further correlated with the information passed from the police dispatcher to the police officer in the field (Hammer, 2011, p. 162). The triangulation of audio record case information supported deviations from within the oral to written information received by police personnel. The

importance that the police officer is adequately informed with respect to the situation the officer will be approaching is to identify any hazards that may be present as well as permit the officer the ability to gather any additional resources that may be required. Ensuring the safety and welfare of the citizen and the police officer was the primary concern within the sphere of responding to an emergency report. With the provided CD of the recorded radio communication, I used the recording for triangulation and analyses.

Documentation

Source documents referencing adherence to protocols in PSAP operations contributed to the exploration of the soon to be initiated wireless device text-message change. Source document verifications (Hines, 2011, p. 40) applicable to PSAP operations included city ordinance(s) previously ratified to define a partnership between COSA, the Bexar Metro 911 Metro District, and the people of San Antonio (see Appendix A). Foundational standards and other documents published by the NENA proscribed the guidance required to maintain the responsibility emergency responders deliver to life, welfare, and safety. TENA source documents were likewise a source augmenting the investigation of relative documents pertinent to the anticipated and expanded wireless device text messaging features within NG9-1-1 related service in the state of Texas. SAPD General Manual documentation addressing emergency call operational direction in the domain of providing public safety and the police communications SOP produced the most localized descriptions referencing actions specific to the San Antonio PSAP. Evidence contained in the documentation assisted in

providing standards and performance situational to the proposed use of wireless device text messaging within emergency response.

Physical Artifacts

Generated by the responding officer, police case reports are physical artifacts resulting from the emergency report placed by the citizen (i.e., call-maker). As a follow-up legitimization process, the police report is the police officer's critical-interpretive perspective (Pozzebon, HEC-Montreal, Titah, & Pinsonneault, 2006, p. 248) of the emergency; the police report notes an accounting of the interaction between the police officer and the citizen. The report of the interaction normally includes a reiteration by the citizen of the initial 9-1-1 call. In analyses, the review of the police report produced information relevant to actions (words and behaviors) occurring as an outcome or consequence of the emergency report placed by the citizen to the police call-taker. A police supplemental report can further exist that can contain changes based upon the citizen's contestation to the initial accounting in the police report. The police report and supplement report served as validation of the officer and citizen meeting. The police report and possible supplemental report comprised the evidentiary trail of the citizen claims; the reports functioned as artifacts for triangulation to the originating call.

Artifacts served as additional evidence and analyzable data. In the case of exploring how a new wireless device text messaging communicative mode may infuse within the emergency reporting system. The police report, as an artifact can be an important component in the overall case (Yin, 1984, p. 88) by uniting stakeholder actions which apply to the broader consideration of how oral and written language are spent and

can influence the impression made on others (Koppelman, 2012, pp. 647-649). When studying a culture, social setting, or phenomenon collecting and analyzing the artifacts produced and used by members can foster understanding (Robert Wood Johnson Foundation [RWJF], 2008a, p. 1). Artifacts further facilitated, validated, confirmed, verified, and substantiated systems dynamics present in the police response to public safety emergency reports.

Data Analyses

The research process in qualitative data analysis was iterative and recursive (Burian et al., 2010, p. 53) and the use of the continued analyses as by virtue of human nature, new thoughts, new encounters, or new knowledge created and recreated meaning in a cycle of learning (San Martin & Calabrese, 2010, p. 113). In research, "analysis is a matter of giving meaning to first impressions as well as final compilations" (Stake, 2010, p. 71). Data analyses or the interpretative phases of the research (Yin, 2014, p. xxii) entail various steps. The first step incorporates describing and stating the facts (i.e., what you have), intuitive processing and categorical aggregation (what you look at), direct interpretation (how you look at it), establishing patterns (what it means), and naturalistic generalizations (what you learn) (Stake, 2010). Using the data collected through four observations, 16 interviews, eight recordings, approximately eight documents, and a minimum of four physical artifacts, a critical review through the convergence of the raw data to information incited knowledge to share regarding the proposed use of wireless device text messaging in police emergency reporting. Case study analysis using linking, shaping, and generating a model (Hashim, 2015, p. 177) from the scrutiny of collected

data directly relative to how communications influence emergency reporting and how emergency reporting influences communication to engage a knowledgeable discussion pertinent to the proposed introduction of wireless device text messing within the emergency reporting sphere.

Beginning with the research questions that served as a template for the analysis (Stake, 2010, p. 78), I described and provided the collected data available for analyses. By describing and providing the data generated, I created transparency for the reading audience through the accounting of data in the effort to present a means to the findings. The step outlined is “know where you are in order to know where you are going”. The data collected via observations of police call-takers, interviews of the participants, physical artifacts such as police reports and supplemental reports, radio and E9-1-1call recordings, and documents such as policy, procedure, and ordinances supplied the basis for gathering the facts of the case study. Observational facts depicting the one-sided details of an oral conversation between the call-taker and citizen included actions surrounding meaning interpretation such as the call-taker asking caller to repeat or confirm words or vocal nuances initiated by the call-taker established facts of the case. Study participants’ responses to interview questions, radio and E9-1-1 call recording distinctions referencing the exchange of meaning and signals through oral language established additional facts of the case with relationship linkage to potential outcomes in written text message use.

Next, observational field notes, interview responses, research side notes, recordings and documents, and other data are subject to intuitive processing and

categorical aggregation. Using the research questions as guides, categorical segregation of the data occurred within the use of NVivo software to create and give structure to the data in preparation for direct interpretation the next step in the analyses. Establishing patterns ensued next where analyses centralized upon abstracting themes and patterns to provide insightful meaning and understanding of how oral communicative properties in an emergency reporting context may translate into a format involving written text communication. Following, in a manner to know what the data means, categorization and theme-production from the oral communication analyses revealed how individuals intend, interpret, and perceive spoken words (Zuidema & Verhagen, 2010, p. 48) delivered and received for transmitting essential information, ideas, and thoughts relative to acts characteristic of emergency reporting. Concluding with what is learned generalization of the findings became part of the final study report.

Data analyses in a qualitative research inquiry approach can begin at the onset of data collection (Bradley, Curry, & Devers, 2007, p. 1761) unlike quantitative research in which the data analyses is a discrete process that occurs after all the data has been collected (Burian et al., 2010, p. 52). Research doctoral students will do well to invest considerable time reading books and articles about the analytical approach (Hoffman 2009, p. 4) as linking the congruencies within the analyses supports the research study findings.

NVivo

I used the NVivo software program during a Walden University research class and I feel comfortable the process greatly aided my research project. Modern data

systems and computer-aided software have advanced data analysis methods highlighting time and energy efficiency. The NVivo structure supported storing and organizing the qualitative data for archiving phrases, theme and code labeling, and analyzing data on various levels (Burian et al., 2010, p. 53). I purchased NVivo QSR International and followed the suggested guidelines for optimal software performance. The analyzed data contained in the NVivo software program will remain stored on my password protected desktop computer for a period of 5 years to conform to the Walden University protocol regarding research data retention. In a similar circumstance, all hard copy materials (i.e., observation notes, interview notes, etc.) discarded for study due to volunteer participation withdrawal was subject to the same retention protocol.

Coding

Strategy is apparent in the coding sequence of data analyses. Coding, a reflective development (Chenail, 2012, p. 248), begins with the methodical review of collected data. Coding encompasses assigning a code word or words representative of a key word or words abstracted from the reviewed text segments comprising the collected data. Coding also involves assigning a word or words reflective of an impression of an effect in the reviewed text segments comprising the collected data. As such, the coding process condenses a large amount of research evidence into representative descriptive and manageable morsels. Finite rules do not exist and my judgment, intuition and ability to highlight similarities played an integral competency in the coding process (Carcary, 2011, p. 12); therefore, I must be conscious to ensure continued objectivity and transparency in this interpretative undertaking. My field notes, the participants' interview

responses, the written transcripts of recordings, and the physical artifact document reviews produced similarities and differences in the data collection to support code generation as well as support research findings.

Patterns

Patterns indicate sameness. In qualitative analyses, the detection of patterns in the coding supports the inductive discovery of relevance to the contextual structure of the exploratory study. Continuing with the assistance of NVivo, a computer-aided software program, the identified patterns can be further highlighted (word processing feature) to stand out for easy reference in establishing relational significance between and within the data collected through observation, interview, documentation, recordings, and artifacts. Patterns describe emergent reality (Simpson & Gill, 2008, p. 39) and may show both congruencies and anomalies to the identified theoretical and conceptual frameworks; therefore, when patterns coincide the results can help a case study to strengthen its internal validity (Stake, 2010, p. 78). The interrelationships exhibited through the generated patterns create levels of interest to gain understanding of the studied phenomenon in the dynamic system of emergency reporting and emergency response (Ranganath & Rodrigues, 2012, p. 12). The NVivo software assisted with the pattern matching; pattern matching is an analytic technique that served as a guiding strategic tool to identify meaningful information.

Themes

Themes categorization production results when coding and pattern matching are subject to continued analysis. The generated theme categorization design enhances

information of the coding and pattern-matching results of primary data analysis as well as plays a critical role in informing the reading audience of pertinent findings relative to the study (Maxwell, 2005, p. 95). As a means of concurrently and collectively building upon the learned knowledge garnered via the analyses, the coding, patterns, and themes triangulate to form conclusive inductive relationships for the study. My need and advantage of immediately upon completion of the various data collecting processes, entering line coding, pattern matching, and theme identification excerpts from the evidentiary data in NVivo proved systematically beneficial considering the large amounts of data collected. The support of the rationale for immediately analyzing data in an on-going fashion was to remain focused (Heinrich, 1984, p. 71). Prior to interviews or observations broader themes involving organizational, substantive, and theoretical categories in a conceptual context were established and based upon my anticipation (Maxwell, 2005, p. 97). The coinciding theme producing or categorization in emergency reporting included (a) linguistics, (b) wireless device use, (c) public safety, (d) customer service, and (e) collaboration. For example, a linguistics theme can include the surmised oral communication analyses revealing how individuals intend, interpret, and perceive spoken words delivered and received for transmitting critical information, ideas, and thoughts. Credibility of the analyses and findings aspire to link competently the possible correlation within and between the gathered evidence in an exploratory mode of understanding the meaning of the phenomenon. By meticulously contemplating the holistic relational parameters surrounding the codes, patterns, and themes resulting from the analyzed data, an understanding of the studied phenomenon persists. Unless respect

of the integrating conceptual parts exists with due-diligence and connection to the construed data analyses, comprehension and appreciation of the wireless device text messaging advent, a complete process is not accomplished.

Steps to Increase Trustworthiness

The initial emergency report, received from a citizen, is the beginning of a police public safety process that extends beyond the PSAP operations and first responder contact. While the most prominent mission of the police PSAP is to receive E9-1-1 calls for emergency response by delivering customer service through speedy and accurate processing of requests for police response, the PSAP processes also perform a vital link to subsequent police actions such as criminal investigations. The progression of the emergency report subject to additional case investigation furthers authenticity (Carlson, 2010, p. 1103). As such, another far-reaching appeal of exploring how wireless device text messaging (i.e., a written communication mode) versus the traditionally orally spoken communication between the citizen and the police call-taker revealed in subsequent police actions is also a relevant consideration in this qualitative case study. Because the relevancy of the study can be far-reaching, the analysis of accumulated data subsists in the conceptual framework of the SAPD delivery of a turnkey business process with primary focus on the inclusive change from oral to written language citizen-initiated emergency reports. The informed inclusion of member checking during analyses, ensuring finding credibility, plausibility, and generalizability for broadened applicability to stakeholders outside the immediate study furthered the trustworthiness gained through the case study exploratory research project (see Table 4).

Table 4

Techniques to Increase Trustworthiness

Description	Process/Result
Audit trail	careful documentation
Reflexivity	disclosing (researcher) bias
Thick/rich description	in-depth understanding
Triangulation	multiple data collection substantiation
Member checking	study participant interpretation approval (researcher)

Note: From "Avoiding traps in member checking" by J. A. Carlson, 2010, *Qualitative Report*, *15*(5), 1102-1113. Reprinted with permission.

Credibility

The delivery of police public safety to NG9-1-1 customers is the big picture. The COSA-advertised customer-first service delivery promise guides the call-taking function of taking requests for emergency service. Customer service must appropriately be a two-way street in the delivery of service. Police call-takers rely on receiving pertinent information from the citizen for effectively processing the emergency report. Producing the analyzed data output, from the data input, received from the citizens, is regarded in correlation with the police call-taker's conceptions and corroborated with documentation, recording, observation, and artifacts to produce the evidence needed to provide guidance in considering how using wireless device text messaging will create process changes.

During the interview process, I verified with the study participants that accurate detailing and diagnosis of the data gained via the data collection method captured the voice and engagement of the citizen-stakeholder participants (Carlson, 2010, p. 1106). In the obligation and requirement to assert findings were authentic, I conscientiously reworked all necessary amendable accounts the participants pointed out. Ensuring the citizens' accountability of the data expressive of the citizen involvement was accurately inserted into the study served many main purposes (i.e., bad info in will equate to bad info into out). Member-checking triangulation of data increases in trustworthiness inclusive of verification and confirmation through the quantity and quality of stakeholder involvement. Carlson (2010) elaborated on the criticality of avoiding self-laid traps in member-checking which can occur more predominately in qualitative research exploration and explanation based upon design protocol and paradigm variation in qualitative inquiry (p. 1103). In interviews, as a data collection technique of the emergency reporting process, the participants are susceptible to bias management and instrumentation rigor as major challenges; therefore, as the collection instrument I was the greatest threat to trustworthiness (Chenail, 2011, p. 255). Carlson cautioned to be aware of transcribing options, providing precise or even examples of changing transcripts for accuracy, informing the participants what to expect when reviewing interview transcripts, advising the participants of intention to use literal selections of their words, and considering the reading and writing capabilities required for the participants' review of transcripts (p. 1111). The caution was a means to ensure member-checking results in increasing accuracy rather than a liability. For this reason, transcripts, as a systematic and

creative product (Chenail, 2012, p. 248) do not include unnecessary filler words such as uh, or um. Directions to the participants caution to avoid embarrassment and not to feel self-consciousness during the interview transcript review. Additional direction during the interview transcript review includes information regarding the manner in which their verbal responses integrate within the study findings (Carlson, 2010, pp. 1111-1112).

Dependability

Dependable study results result through strategy. When using a blueprint or roadmap during the conduction of the research inquiry, the organization and consistency of following the research steps ensures focus and the highest quality research effort (Burian et al., 2010, p. 49) to provide a benchmark for emulation of a future investigation repeating the study. The study's population, which contributes to dependability, enumerated through qualifications and descriptions is pivotal to subsequent interactive inquiries (Peacock, Averill, & Kuligowski, 2011, p. 7). For example, in this study, the population included individuals with direct knowledge of placing, receiving, acting, and responding to an E9-1-1 emergency report and established consistency in the logic of selecting the study participants. The rich descriptions of the participants' perspectives of the phenomena along with rich detail of the contexts surrounding the phenomenal experiences, requisite in data saturation, equally contribute to trustworthiness through dependability. Dependability and creditability go hand-in-hand to aid in transferability. Reliability is transparent within documentation and traceable through an audit trail as previously noted in Table 4 (Carlson, 2010, p. 1102). Coded analyzed data subject to reliability existed within observation, interview, recordings, and documentation collected

evidence. Field notes, archives, and reports become factors in the method and methodology scrutiny by an independent auditor. When an audit trail is absent, the dependability appraisal of the study declines or can be nonexistent.

Confirmability

Supporting confirmability enacts creating strength in the study. Ensuring analyses results and report findings are accurately reflective of the collected data, "internally coherent, supported by material, and represent more than figments of the inquirer's imagination" (Guba & Lincoln, 1989, p. 243), study inquiry techniques of triangulation, reflexivity, confirmability audits, audit trails establish a study's confirmability (Lincoln & Guba, 1985, p. 200). Strength is discernible through transparency and I must conform to follow the precedent set through earlier research methods and methodology reporting the steps taken in their own study. Police emergency reporting is a public occurrence that equally draws upon the reading audiences' knowledge of the phenomenon and by involving the study participants to enlist genuineness and truth of the participants' perspectives gains a high level of credibility. Wireless device text messaging, another widely known social occurrence, also adds to the genuineness, truth, and acceptability of the study's credibility and by incorporating literature surrounding written language in the form of conversation and text messaging. The known characteristics and operational perimeters completing the phenomenon complete the credibility.

Ethical Protection

Scientific endeavor establishes strict adherence to rules of conduction will contribute to the authenticity and integrity required of academic research. Ethical

practices equate to ethical protection. Within the concept of ethical protection, I assumed responsibility for research extending to cultural, social, and legal comportments. The sensitivity of studying emergency cases recognized the public but private and delicate circumstances of a public safety response setting action. Admittance to the call center's dispatching floor requires current Criminal Justice Information Systems (CJIS) authorization and approval due to the sensitivity of the sworn police enforcement nature. As a member of the SAPD, accessing the San Antonio PSAP is a common occurrence and the admittance to the call center's dispatch floor did not require solicitation of an escort or gatekeeper.

Case study research surrounding real-life public safety emergency circumstances can be suffused of actions representing "judgments about good and evil, or right or wrong" (Masrom et al., 2011, p. 371). As such, escalated human behavioral conditions imposed in unusual daily occurrences are contextual. Subjected to high-intensity emergencies, PSAP police personnel are human and therefore susceptible to error. Therefore, through the application of ethical principles, reducing harm increases the protection of the human subjects or the participants in any research study (Gallagher, 2012, pp. 55-56). Ethical protection consideration likewise applies to the literary communities whose works are subject to reviewing, paraphrasing, quoting, and elaborating; as such, source reference acknowledgement ensues. By creating a protocol to follow which guided the research, a conformity to standards evenly applied throughout the research as well as actions displayed towards the study participants was a criteria that was developed to avoid bias, discrimination, plagiarism, and misinformed findings.

Researcher Protocol

Using protocols, in processes subject to ethical review, can reduce controversy, ensure uniformity, and increase propriety (Marti, 2008, p. 2). The transparency throughout the research project, referencing the plans and steps as protocol guidance in the executing of the scientific study, supported empirical verification. I did not note incoming caller-identification (i.e., ANI-ALI representation) on police call-taker telephony equipment as I held human subject privacy to the highest standards in accordance with police organization adherence to public privacy enactments. Likewise, the recorded taping of the reported emergency is public information and held to strict privacy through this study. The Walden University Institutional Review Board (IRB) protocols similarly governs human subject privacy, were applicable, and applied during data collection processes of observations, interviews, and the reviews of the audio recordings in this study. As city employees the police call-takers, police dispatchers, and police officers possessed all the granted privileges available through the Civil Service Rules and Regulations of the COSA governing courtesy to fellow employees and misconduct.

The data, both hard copy, electronic copy, and audio format, created and collected throughout the study is confidential. Folders labeled and filed correlative to the study participant designation are stored within my residence. Access to the filed data was restricted to the researcher and the study participants upon request. Maintenance of the filed data persists for a period of 5 years to conform to the Walden University protocol regarding research data retention. Research case study protocols founded by pioneering

researchers and subsequent researchers following their example contributed to established and practiced research congruence and conformance.

Public Information

Mobile phones are increasingly replacing residential landline telephones (Snider, 2011, p. 1); the mobile phones likewise changing the way people communicate. By virtue of the mobile phone being mobile (i.e., not restricted to use in one location such as a home residence or a now nearly nonexistent public pay telephone), the mobile phone allows for citizens to call 9-1-1 while walking around town, sitting in a transit bus, or riding in a car. A call placed from a mobile phone initiated in public space can no longer be considered private as individuals in the immediate can hear one side of the conversation and a basis can be made that calls initiated, in such a circumstance, via a mobile wireless device are no longer private. A text message though visible to only the sender and receiver follows a process similar to a wireless device (voice) phone call. Through the exploration of wireless device text messaging for reporting an emergency, the reporting of the emergency into a governmental facility, become a public matter.

The use of public information, as with the use of any information, can carry risk; risk may result in liability; therefore, recognition of public information takes into account and questions the degree to which human behavior in public space elicits as public behavior (Van Den Hoonaard & O'Neill, 2003, p. 310). My access to the public information in the form of related 9-1-1 recordings and reports did not overshadow the individual's protection to privacy. In the state of Texas, "no indication of unusual rules or restrictions" pertains to 9-1-1 requests for service (First Amendment Center, 2012, p. 6)

and “911 calls fall under the TX Public Records Act, which makes all records available to the public through request” (Texas State Library and Archives Commission, 2013, p. 1). I followed access protocols to government information through the Texas Public Information Act and an ORR (see Appendix B).

Participant Consent

Additional insurance to addressing possible liability surrounding the study existed in the form of gaining the participants consent; the consent request to the potential participant must be clear and informed. Discussion of the possible ethical, legal, and social issues (ELSI) inherent in the research study must ensue between the study participant recruiter (i.e., researcher) and the recruited individual. Prior to gaining consent from the study participant of voluntarily assisting in the research study, I ensured the human subject understood the role the participant will assume. An important feature of the consent process is the issue of protecting personal information (Howard et al., 2011, p. 157). As such, the potential participant must clearly receive information regarding their participation (Bryman & Bell, 2007, p. 139) as well as given the opportunity to ask and receive response to any concerns regarding how information received via participant-related observation and interview relates to specific study objectives (Howard et al., 2011, p. 156). In a calculated effort to gain the individual's acceptance, I presented a fully informational consent process to the potential participant (Corneli et al., 2011, p. 412) with concentrated focus placed on clarity and definition of the words and terms germane to the research process (Van Den Hoonaard & O’Neill, 2003, p. 309). Research disclosure, through the uniform informed consent I presented,

contained exact information that did not deviate among the participants and participant groups. I further ensured that the participants possessed a community of understanding of the research project. Upholding an ethical correlation between the participant and me included all necessary steps relative to seeking the participant's consent. Both the participant and I signed the Voluntary Participant Consent Form. The informed consent also served as a forum for future research (Vreeman et al., 2012, p. 13). The study's perimeters allowed the participants to elect to withdraw from the study at any time; therefore, in an attempt to prevent delays during the data collection phase or prolong the data collection phase, I developed an ethical researcher-participant relationship with each of the individuals consenting to assist me with my research. Risk to the subject, principal investigator, sponsor, and study (Nauyok, 2010, p. 61) is the enforcing strategy to obtaining the needed consent.

Summation

A researcher must critically reflect and deduce how to provide a best response to research questions. Research can engage quantitative, qualitative, or mixed-methods inquiry. Upon review of scholarly research principles and practices surrounding the multiple inquiries, a qualitative case study research study proved strongest to explore the proposed use of wireless device text messaging within NG9-1-1. As the San Antonio PSAP management posses for NG9-1-1wireless device text messaging, exploring the use of texting encourage critical thinking among E9-1-1 stakeholders. In Chapter 3, I disclosed the methodology and methods strategy fundamental to the research pertinent in incorporating wireless device text messaging as a communication mode in police

emergency reporting. The data collection plan included, study participant face-to-face interviews, observations, artifact and documentation analyses, and records reviews in order to provide support to address the central research question and study subquestions. Walden University's IRB approved my research through approval number 11-05-15-0130545 (expiration date November 4, 2016).

NVivo software was the mode for undertaken data analyses. Through coding and key theme identification, emerging patterns led to Chapter 4 findings. Through stringent measurement of the qualitative research through the engagement of multiple data collections methods and triangulation, the genuine insights derived from the data analyses led to reliability and trustworthiness (Nicholson, Lindgreen, & Kitchen, 2009, p. 201). Qualitative study transferability assurance projects findings to other PSAP assuming Text-to-9-1-1 ventures. The San Antonio population is unique and the police emergency cases are equally distinctive; however, the context of studying text messaging characteristics to apply to an environment where oral communication variably and structurally are equivalent. To enhance research, I included interviews with insights into the Text-to-9-1-1 activities reported by U.S. counties, jurisdictions, and entities after deployment of the text feature in emergency reporting. I present data accumulation and findings in Chapter 4 for support of the study's significance.

Chapter 4: Results

Introduction

The purpose of this qualitative study was to explore the potential use of written communication–via a wireless device's text message–to report a police emergency. An emergency 9-1-1 police report is a vital link between citizens requiring police emergency assistance and law enforcement personnel delivering police services. Through the perspectives of a population with direct knowledge of placing, receiving, acting on, and responding to an emergency police report, the communication activity consisting of orally communicated emergency reporting interactions between the call-maker and the call-taker created the setting for the case studies. Insights into the potential transition to written text messaging communication through wireless device text messaging use during emergency reporting fills a gap in the literature.

Studying the phenomena revealed responses to guiding research questions. Discovering how the introduction of wireless device text messaging use in emergency reporting changes San Antonio PSAP stakeholder processes served as the central research inquiry. How communication influences an emergency request for service, as well as, how an emergency request for service influences communication similarly guided the qualitative inquiry. What changes are inspired when the citizens' emergency requests are initiated via a wireless device text message, in addition to, how addressing change based upon technologically enhanced communication can be coordinated in an effort to influence a successful transition to text message use for emergency reporting were likewise steering queries to explore the social phenomenon in this study.

Central to creating the context of the study and addressing reader comprehension is incorporating and providing study details; therefore, I begin Chapter 4 with the study setting and demographic information specific to the participants. The chapter continues with data collection and data analysis processes and details. Evidence of the study's trustworthiness, represented through credibility, transferability, dependability, and confirmability, follows the data collection and data analysis results. Details of research question findings, in support of Chapter 5 discussions, follow the presentation of the evidence of trustworthiness. I conclude the chapter with a summarized review of the presented information pertinent to the principle outcomes of the studied phenomenon.

Setting

Answering E9-1-1 calls to assist citizens obtain emergency services (COSA, 2013a, p. 1) is the primary duty performed by police call-takers. After receiving and documenting the emergency call information and ensuring the information is detailed, accurate, and clear, the call-taker forwards the call information to the police dispatcher (COSA, 2013a, p. 1). The dispatcher, in turn, relays and forwards the call information to a police officer employing technical and administrative radio communication (COSA, 2013b, p. 1). Both the police call-takers and the police dispatchers perform their duties within the PSAP facility; governmentally, the PSAP operations are a partnership between the between the COSA, the Bexar Metro 911 Network District, and the people of San Antonio (see Appendix A). A COSA police communications manager oversees the PSAP administrative and operational duties and supervisory duties of the personnel (COSA,

2013c, p. 1). Responding police officer assignments include patrol, traffic, crisis response, and interdiction details (SAPD General Manual, 2014, p. 97).

Through authorization of the SAPD's chief of police, the study participant recruitment of the police call-takers and the police dispatchers took place at the PSAP facility (see Appendix C). Recruitment notification of informational sessions leading to voluntary study participation as well as the conduction of the informational sessions proceeded within the lunchroom at the PSAP facility (see Appendix D). The call-taker and dispatcher working schedules include 8-hour daily working shifts with 2 relief days weekly; therefore, I held nine informational sessions to ensure a variety of meeting dates and times. Successful call-takers and dispatchers recruitments ensued within 8 days of the final informational session. Prior to field observations, I obtained police call-taker informed consent. I obtained police dispatcher informed consent prior to face-to-face interviews.

Based upon the voluntary participation of call-takers and dispatchers, case studies were established; the establishment of the case studies led to the potential police officer voluntary participant recruitment. The police officers responding within the established emergency case studies received a notification flyer (see Appendix E) detailing the study and requesting voluntary study participation. I placed the flyer in the appropriate police officer's mailbox, within the police substation, corresponding to the police officer's duty assignment. The authorization letter from the chief of police (see Appendix C) further addressed police officer recruitment. I obtained police officer informed consent prior to face-to-face interviews.

The citizen voluntary participant recruitment strategically included identifying four wireless dealer stores located in the north side (NS), south side (SS), east side (ES), and west side (WS) quadrants of San Antonio. The strategy included obtaining a diversity of citizen representation of the cities' population. I stood outside the wireless dealer stores business areas, without encroaching upon business privacy, to recruit citizens (see Appendix F). Citizen recruiting continued within a 5-day period with one recruitment location revisited due to inclement weather and little citizen contact. Within approximately 13 days, the private citizens responded to the recruitment requests. Delayed due to November holiday time, interviews occurred within the following 11 days. Prior to the citizens' face-to-face interviews, I obtained informed consent from each participant.

Demographics

Sixteen voluntary participants participated in the research study (four police call-takers, four police dispatchers, four police officers, and four citizens). The names of the voluntary study participants remained confidential; no first or last names appeared on observation, interview, or researcher notes. The ORR audio E9-1-1 calls, radio communication tapes, and police reports contained no identifying information to include first or last names; the propriety personal data omission by the responding governmental organization followed established privacy enactment protocol and ensured confidentiality. For recordkeeping and reporting purposes, designated labels identified the participants (see Table 5).

Table 5

Study Participants: Police Call-Takers, Police Dispatchers, and Police Officers

Case	Call-taker	Dispatcher	Police Officer
1	E1CTO1I1	E1PDI2	E1POI1
2	E2CTO2I2	E2PDI1	E2POI2
3	E3CTO3I4	E3PDI3	E3POI3
4	E4CTO4I3	E3PDI4	E3POI4

"E" identified the Emergency (case). "CT" identified the call-taker participant, "PD" identified the police dispatcher participant, and "PO" identified the police officer participant. "O" indicated the participant participated in an observation and the following number indicated the place within the observation sequence that the action took place. "I" indicated the participant participated in an interview and the following number indicated the sequential order within the interview phase that the action took place. A factor which made call-takers and dispatchers ineligible to participate in the study included less than 6 months of employment with the COSA; the criteria was based upon the employee having completed their initial probationary status and past demotion or termination contingencies affecting the study. Worthy of mention is that police dispatchers may possess work experience as a police call-taker through the COSA or other governmental entity. The characteristic summaries of the police call-taker, police dispatcher, and police officer study participants are represented in Tables 6, 7, and 8.

Table 6

Characteristics Summaries of the Police Call-Taker Study Participants

Participant	Gender	Age	Yrs of Svc In Police Position	Yrs as Wireless Text User
E1CT	M	36	15	15
E2CT	F	40	16	20
E3CT	F	32	10	17
E4CT	F	30	11	9
Average/Ratio	3:1	34.5	13	15.25

Table 7

Characteristics Summaries of the Police Dispatcher Study Participants

Participant	Gender	Age	Yrs of Svc In Police Position	Yrs as Wireless Text User
E1PD	F	31	8	14
E2PD	M	40	9	7
E3PD	F	45	10	21
E4PD	F	33	10	13
Average/Ratio	3:1	37.25	9.25	13.75

Table 8

Characteristics Summaries of the Police Officer Study Participants

Participant	Gender	Age	Yrs of Svc In Police Position	Yrs as Wireless Text User
E1PO	M	27	5	12
E2PO	M	38	18	3
E3PO	M	30	6	8
E4PO	F	26	11	9
Average/Ratio	3:1	30.25	9	7

Citizen designating labels were C1I1, C2I2, C3I3, and C4I4 with "C" designating citizen, "I" designating interview, and the number following the "I" indicating the sequence in which the private citizen interview took place (see Table 9). The criteria for private citizen inclusion as study participants was being a wireless device service subscriber (see Table 10), possessing experience in the use of text messaging, as well as experience in placing a 9-1-1 emergency call. All the participants were adults and no minors participated in the study.

Table 9

Study Participants: Citizens

Participant	Citizen	Recruited location
1	PC1I1	WS
2	PC2I2	NS
3	PC3I3	ES
4	PC4I4	SS

Table 10

Characteristics Summaries of the Citizen Study Participants

Participant	Gender	Age	Yrs as Wireless Text User
C1	F	30	14
C2	M	51	7
C3	M	48	10
C4	F	22	16
Average/Ratio	1:1	37.75	11.75

Data Collection

I used multiple data collection methods and strived to create a holistic referential and contextual culmination of the evidentiary support data required for a knowledgeable and informed inductive reflection of the studied phenomenon. Five sources of evidence, collected through direct observations, interviews, documentation, archive records, and physical artifacts (Yin, 2014, p. 12) served as the means to support the case study inquiry to explore wireless text messaging use within emergency reporting. I captured additional notes and thoughts in a data collection journal for supplemental purposes of supporting analyses findings.

Observations

The PSAP facility has areas for call taking, dispatching, expediting and supervising functions as well as administrative offices. Walls and a hallway separate the administrative offices from the dispatch floor where call taking, dispatching, and supervising occur. Two lengthy rows of call-taking consoles are located towards the south wall and were the scene for me to conduct call-taker field observations. Four call-takers participated in the data collection observational processes. One observational process represented one emergency case and one case occurred within each of the four call-taker work day shifts (i.e., 0700-1500, 0700-1700, 1300-2100, and 2100–0700). Observations occurred on November 23, November 25, November 27, and November 28, 2015.

The durations of each of the observations lasted the length of the received E9-1-1 call (see Table 11). I created and used a data collection template for observation approved

by Walden University's IRB. On the data collection template, I noted recordkeeping information such as the date, the beginning time, the ending time, and the study participant code/label. Additional note taking areas, on the template, included descriptive notes referencing physical setting, sequential activities/actions, and non-verbal/body behavior. Areas for noting interactions with other persons or inanimate objects at the PSAP, and participants' vocalized comments were available. The template further included an area for my additionally observed items; I also used the area for my notes post observation. I used a ballpoint pen to hand write and collect all the data as noted on the data collection observational template. No variations from the data collection plan, as previously presented within Chapter 3, or unusual circumstances in data collection occurred.

Table 11

Case Study Call Durations

Call-taker study participant	Call Duration measured in minutes and seconds
E1CT	0:02:17
E2CT	0:02:28
E3CT	0:04:01
E4CT	0:03:31

Interviews

Sixteen study participants participated in face-to-face informal interviews. Four call-takers, four dispatchers, four police officers, and four citizens comprised the sixteen participants. Meeting rooms within San Antonio Public Library branch locations provided the setting for the interviews; the use of a meeting room allowed for privacy. I

present the interview schedule in Table 12. Police call-takers received a duplication of the signed participant consent form prior to the conducted observation and all other participants received a duplication of the signed participant consent form prior to the conduction of the interview.

Table 12

Interview Schedule

Study participant	Scheduled/Completed Interview Date	Study Participant	Scheduled/Completed Interview Date
PC1	December 2, 2015	E2PD	December 10, 2015
PC2	December 3, 2015	E1PD	December 10, 2015
PC3	December 4, 2015	E1PO	December 10, 2015
PC4	December 7, 2015	E3PD	December 11, 2015
E1CT	December 8, 2015	E2PO	December 11, 2015
E2CT	December 9, 2015	E4PD	December 12, 2015
E4CT	December 9, 2015	E3PO	December 13, 2015
E3CT	December 10, 2015	E4PO	December 14, 2015

I designed and used an interview template, as approved by Walden University's IRB, consisted of 20 open-ended interview questions that guided and maintained a discovery-oriented research study (Chenail, 2011, p. 255). I asked the participants if the setting was relaxed in order to share their experiences and perceptions comfortably during the interview (DeFina & Perrino, 2011, p. 2). As intended, audio recordings of the interview proceedings were not included within the data collection process. I used a

ballpoint pen to hand write and collect all the data as noted on the data collection observational template.

Nine of the interview questions were general in nature and queried to the 16 study participants. Three additional questions pertained to both police call-takers and police dispatchers along with one question posed to just call-takers and another question posed to just dispatchers. Two questions were specific to police officers only while four additional questions were relevant to citizens only. The strategically designed exploratory interview questions intended to gather the participants' perceptions (McDonald et al., 2012, p. 66) of communication, text messaging, technology, change-management, and police emergency reporting highlighted the theoretical and conceptual framework of the study. The interview template contained space to record information such as date, beginning time, ending time, and participant code/label. Interview times durations ranged between 33 and 28 minutes bringing each interview time very close to the advertised 30 minutes. As presented in Chapter 3, the interview plan included the call-taker interviews to occur within 10 days from the field observation of the call-taker; however, that condition did not result. Results were interviews taking place 15, 14, 14, and 12 days from the initial observation. The interviewer did not encounter any unusual circumstances in interview proceedings.

Recordings

Collected data in the form of archived recordings specific to the study's emergency cases included the live E9-1-1 incoming emergency call and the recorded police radio transmission occurring at the time of the emergency case study (Maly et al.,

2013, p. 1). I electronically completed the official request form online through the city website at www.sanantonio.gov. Within the website, I selected the open records icon, selected submit an open records request icon, selected the request type, and created a necessary online account. The request form required completion of the following line items:

1. Date of request, name of requestor, requestor's email address, requestor's home address, and contact telephone number.
2. Date of the incident you are requesting and approximate time of the incident.
3. A detailed description of the information requested.

The online ORR submissions, to the Department of Communications and Public Affairs, took place on December 16, 2015 (1), December 18, 2015 (1), and December 21, 2015 (2). Based upon the request type involving the SAPD, the SAPD Records Office received the requests from the Department of Communications and Public Affairs. The SAPD Records Office then contacted the communications custodian of records to submit the requested information to the records office coordinator. As stipulated on the ORR form:

> "The San Antonio Police Department Records Office will make every effort to get the information that you request to you immediately. The amount and volume of requests received by the Records Office varies. If the request cannot be met within ten (10) business days (excluding weekends and holidays), the Records Office will notify you with a reasonable date of expectancy."

I received the requested materials in a timely manner; however, due to the city's winter holidays (approximately 7 business days) three of the requested materials delivery took longer than expected and were the only unusual circumstances that occurred in the data collection. No variations from the data collection plan, as previously presented within Chapter 3, occurred.

Documentation

SAPD organizational documents, represented as SOP's, served as data sources. An electronically accessible data base collection of the departmental SOPs yielded information specific to the context in which the research participants operate. The SOPs also served as document sources with pertinent information referencing departmental member's response to an E9-1-1 request for service. Data collection using the SOPs occurred within a 3-day period where I printed the pertinent pages containing applicable information as the database restricted my ability to copy and paste due to the document's read only restriction. I highlighted and maintained the relevant document information in a binder to use for analysis.

The Police Department Manual (2014) served as a data source. The manual is also an electronically accessible document. Key words such as 9-1-1, call-taker, dispatcher, police officer, and emergency using the find editing function aided in locating pertinent protocol information within the manual document. Data collection using the manual occurred within a 2-day period. As a read only document, I again used the process of printing the pertinent page containing the needed information, highlighting, and maintaining the printed pages in a binder for analysis.

Source documents researched through the COSA city clerk ordinance archives (online) referencing 9-1-1 emergency calls, the Bexar Metro 911 Network District, and the establishment of the PSAP created additional data collection documentation. An online search via the San Antonio government website produced three viable source documents for analysis. The search for the documents occurred within a 5-day span. I printed the pertinent source documents and maintained the documents in a binder for future use.

Foundational standards and other documents published by the NENA and the TENA accessed via their respective websites produced linked websites found through an Internet search delivered documentation relevant to the purpose and protocols of 9-1-1emergency response. Documentation referencing NG9-1-1 proposed technical and operational guidelines toward the use of wireless device text messaging in emergency reporting found on the Worldwide Web created additional source documentation for analysis. I printed the pertinent source documents and maintained the documents in a binder for future use. No variations from the data collection plan, as previously presented within Chapter 3, or unusual circumstances in data collection occurred.

Physical Artifacts

I requested and received copies of the police reports produced by the police officer study participants; I requested that the names and propriety information of the citizens identified within the reports concealed in accordance with privacy enactments. Four separate police report requests, requested through the SAPD Records Office, represented each of the four emergency cases in this case study. On 3 separate days, I

stood in line at the Records Office and paid for each of the reports; time elapsed was 10 minutes on day 1, 6 minutes on day 2; and 13 minutes on day 3 for the separate transactions. I placed the police report evidentiary trail in a binder for future analysis; the physical artifact validates the officer responding the citizen reported emergency. No variations from the data collection plan, as previously presented within Chapter 3, or unusual circumstances in data collection occurred. No police supplemental reports related to the obtained police reports.

Data Analyses

The data analysis process began with my taking inventory of the accumulated data. Faced with the fact the collected data existed on accumulated sheets of papers and templates, and not in an electronic word processing state easy for importing, I used the strategy of placing coded adhesive strips of colored paper to the appropriate narrative areas for easy visibility to return to the coded descriptive texts for future electronic storage and organization. The codes represented key conceptualizations which materialized by my anticipating (Daniels et al., 2011, p. 3) operational and inherent similarities substantial to the proposed introduction of use of text messaging within the emergency reporting process (Carcary, 2011, p. 12). The codes likewise highlighted concepts within the research questions that further served as a template for the analysis (Stake, 2010, p. 78). For example, beginning codes of safety represented as SAF, communication represented as COM, change represented as CHA, and technology represented as TEC served as a starting place to develop the coding structure (see

Appendix G) for a complete listing of codes, assigned colors, specific text correlative to each code.

Using NVivo QSR International software program to electronically store and organize the initially coded phrases, paragraphs, sentences, or words, I inputted the first draft of coded text. Using an inductive approach to the data analysis, as I immersed deeper into the templates and pages of collected data, additional codes emerged from the collected data as phrases, paragraphs, sentences, and words appeared or reappeared within the collected data adding to the knowledge base requisite for objectively considering all the collected evidence. The manageable coded material then created the basis of larger groupings categorized to represent congruencies and anomalies reflective of the study's theoretical and conceptual frameworks. For example, from extracted text codes as TEC and COMM arose the identified patterns signifying training or instruction. The patterns generated from among the codes and the specific text exemplifying the patterns created a conglomerate of the participants' perspectives relative to the theoretical and conceptual framework of this study. Through the pattern detection, realistic meanings and understandings of this studied phenomenon, as perceived by the participants, within the dynamic system of emergency reporting, emergency response, and the proposed use of wireless device text messaging emerged.

Themes illustrating combined experiences (Daniels et al., 2011, p. 3) resulted as new thoughts, new encounters, or new knowledge manifested from the analysis cycle of learning (San Martin & Calabrese, 2010, p. 113). The themes produced included (a) management of change, (b) remaining mission focused, (c) processes require

understanding, (d) actions result in reactions, and (e) inspiration, integration, and information. The themes construed to form information, ideas, and thoughts relative to acts characteristic of emergency reporting within the proposed wireless device texting technological advancement. A comprehensive accounting of the themes representative of the patterns revealed content analysis and identified inductive relationships emerging from the collected data. The analysis supports the study findings described later in this chapter. To my beginning researcher's knowledge, no discrepant cases emerged through the data analysis.

Evidence of Trustworthiness

Each of the voluntary participants possessed experience in the police emergency reporting or responding process. Awareness, insights, and assessments the participants contributed via observations, interviews, and physical artifacts established "confidence in the truth of the results for the topics or informants and the context in which the research was undertaken" (Lincoln & Guba, 1985, p. 198). The data collected through policy, procedures, and ordinances specific and unique to a police department and emergency reporting environment established additional credibility, transferability, credibility, and confirmability reinforcing the evidence of trustworthiness.

Credibility

In order to produce understanding of the phenomenon, I followed the intended strategy of studying the phenomenon using multiple data sources. The triangulation of the analyzed data created ranges in personal perspectives regarding the conceptions intrinsic to the theoretical and conceptual framework of the study. The correlation in the flow of

data by understanding the sharing of information by capturing the voice and engagement of the citizen-stakeholder participants (Carlson, 2010, p. 1106) through the communication between the citizen and responders allowed for triangulation of the data. Employing triangulation created a means to investigate the intersecting and bisecting analyzed data to substantiate and safeguard for rich, robust, comprehensive and well-developed (RWJF, 2008b, p. 1) findings. The implications resulting from triangulation led to strong credibility.

The intended use of engaging the participants in the member checking process, as discussed within Chapter 3, did not materialize. During Walden University's IRB approval, I received the reply:

> "If the purpose of member checking is only to have the participants review them for accuracy of what was said, please note that doing so places a burden on the participants' time and effort that can outweigh the benefit to the research. That is because people do not typically remember everything said in an interview and so their ability to make corrections is limited".

As a result, the determination not to create a "self-laid trap" (Carlson, 2010, p. 1103) resulted as a means not to generate a liability. In addition, illuminating credibility was the fact that police emergency reporting is a public occurrence that equally draws upon the reading audiences' knowledge of the phenomenon and by involving the study participants to enlist genuineness and truth of the participants' perspectives gains a high level of credibility.

Transferability

The evidence to expound transferability within the context of engaging text messaging and written communication use in emergency reporting situations where oral communication is currently and most commonly used centered on thickly and richly describing the phenomenon with precise methodological scrutiny that the findings are assured to transfer and apply to other PSAP police environments assuming Text-to-9-1-1 ventures. The thick description of the field observations of call-takers engaged in oral communication with callers focused on the social interaction of sharing communication and ensuring understanding of the information interchange. In my observations of the police call-takers, the police call-taker oral communication interaction, though observed as one-sided, illustrated the need for clarity within a conversation. My observed actions included the police call-taker asking multiple clarifying questions to the caller. Messages-to-signals production and signals-to-messages interpretation (Zuidema & Verhagen, 2010, p. 55), depicts communication between individuals, occurs daily in business and personal human interactions; therefore, the significance of how communication acts support or promote clarifying needs between individuals to reduce inefficiency (Carroll et al., 2013, p. 286) extends to other written communication such as electronic mail (e-mail), interoffice correspondence, memos, and letters. I did not note any implementation of or adjustments to the initially described transferability strategies.

Dependability

Observations, interviews, and document reviews, as intended, resulted in collected overlapping data, and thus overlapping perspectives (Government of Canada,

2015, p. 2) to enhance dependability. As noted in Chapter 3, the study's population contributed to study dependability. A police call-taker, police dispatcher, and police officer duties emulating a chain reaction for addressing a response (in this case emergency response) can exist between persons in cities, counties, and townships throughout the nation. The act of a person (for this study a citizen) telephoning another person for response action equally denotes a common communication process. Dependability and creditability go hand-in-hand to aid in transferability. Through extensive methodology accounting, I recorded any changed conditions or study design changes required for the inductive exploration for better understanding of the study's context for research strategy and step emulation.

Confirmability

The establishment of confirmability, as indicated in Chapter 3, transpired through the practice of triangulation, audit trail, and reflexivity (Lincoln & Guba, 1985, p. 200) as well as attaining my neutrality in that the participants' perceptions shaped the study and not my bias or motivation. A clear description of the research path, research design, sampling, and methodology, including a systematic reference of the data collection techniques, data management, and data analysis generated the audit trail. My accounting of the investigation reinforced transparency and objectivity for added reflexivity. As previously disclosed, I possess knowledge and understanding of text messaging use and the police emergency reporting process based upon over 20 years of service at SAPD; therefore, the complexity of the research phenomenon led me to detect and ensure that skewing did not exist within the analyses and findings.

Summary of Findings

Credibility, transferability, dependability, and confirmability resounded within the analyses and exhibit within this study findings. The Summary of Finding section used the evidence from the collected data and responded to the study's research questions to contribute new knowledge instrumental to gaining an understanding of the phenomenal study. The significance of the study's findings manifested in the patterns and themes realized; patterns provide insight into the human mind. Through the presentation of findings, I aimed to impart important results to the leaders, emergency community, and citizens in an appreciation to consider the concepts in the process to embrace the technological advancement in a widespread societal concern.

Research Subquestions 1 and 2

The first two subquestions provided a baseline to reference how the participants viewed the communicative process inherent in an emergency. Research subquestions 1 and 2 were "How does an emergency report for service influence communication?" and "How does communication influence an emergency report for service?"The participants' perspectives created a benchmark for the impact of the introduction of text messaging. During the interview phase, I posed a question to citizens centered on previous E9-1-1 calls they placed, how an emergency event affected their communications, and what were some of reasons they felt their communication and information sharing with the police call-taker were positive or negative. Each of the participants considered the communicative process to include required actions between the parties. Figure 7 represents the communicative process as described by the participants with overlapping

or simultaneous actions of speaking, listening, and comprehending influencing each of the processes actions.

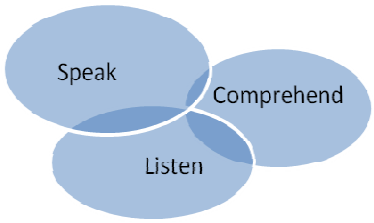

Figure 7. Citizens' communication process.

Three-fourths of the citizen participants (30 year old female, 51 year old male, and 48 year old male) responded that communication in an emergency created levels of negative personal emotions and concerns (see Figure 8). The participants further elaborated, negatively, that they felt that the communication process included the police call-taker interrupting their communication to extract specific information rather than listen to what they "wanted to say" and that the interruptions fueled their concerns. The 22-year-old female citizen respondent did not refer to negative feelings during communication with the call-taker nor levels of negative personal emotions or concerns. Each of the participants also responded that the time element "was very important, as they wanted the police response addressed timely".

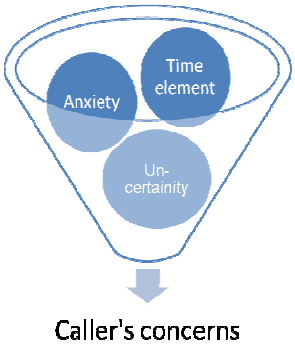

Figure 8. Callers' concerns

Each of the four call-taker observations supported the perspectives of the callers. I heard the call-taker ask 5- 6 searching (out information) questions during communication with the caller. Triangulation of data with the audio recording of the E9-1-1 calls confirmed the call-takers asking the following probing questions: “Who was present when the incident occurred?” “What time did this occur?” “Where was the exact location of the incident?” Did you witness anyone leaving the scene?” When asked about the communication process in an emergency during the contact with the caller, the call-takers identified emotions, vocal tones, rate of speech, raised voices and vulgarity, background noises, and loudness or lack of loudness affected the communication process. The police call-takers and police dispatchers equally described the communication process as a method of speaking or delivering information, listening or receiving information, and comprehending but added responding as an included action in the communication process during an emergency. SOP for information gathering by the police call-taker states: “The police call-taker will obtain the basic information from the caller. At a minimum, this information should include: the address or exact location of the incident, call back number, type of emergency, time of occurrence, hazards, identity of those involved and their location.”

An interview question I posed to police officers provided information relevant to the communicative process as related to their contact with citizens in the field. Again, emotion was a common response from the police officers regarding contact with the citizen. The police officers added a new dimension to the communication process through

the inclusion of the police report as a communication tool relevant to follow-up detective's actions.

Research Subquestion 3

Research subquestion 3 sought to uncover how might emergency report initiation and emergency response interaction engage when emergency reports exist in a wireless device's text message format. During the interview phase, citizen and call-taker study participants used personal knowledge they possessed to describe positive experiences and negative experiences with texting (see Figure 9). When questioned how they felt texting would affect reporting an emergency request, the police call-takers, police dispatchers, and police officers replied similarly with the concern that missing vital information would affect the citizen's safety. The missing information would affect the overall processing time and the time spent to gain the correct information could be life threatening.

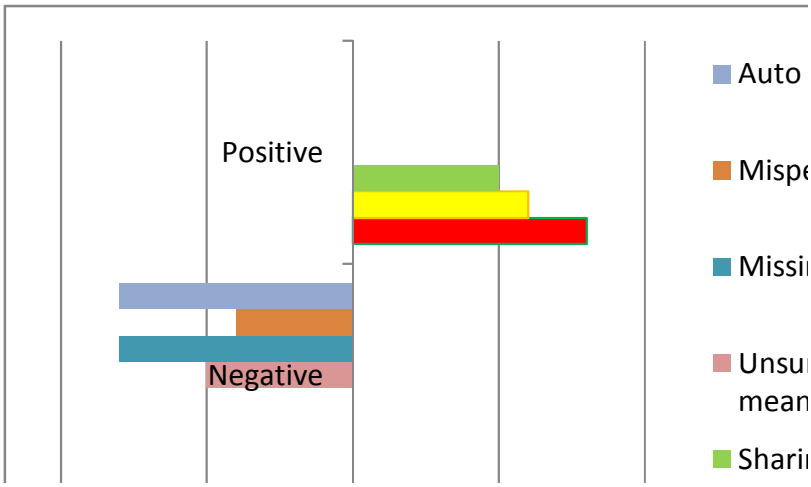

Figure 9. Positive and negative texting experiences.

One police officer repeated a story a friend of his had related to him about when a friend had texted him about noises within her house. The friend hid in the closet and did not want the sound of a telephone conversation to be heard so she texted her police officer friend who then called for dispatch to send an officer to her location. When the citizens answered the same question regarding how they felt texting would affect an emergency request, one citizen (22 year old) responded that the ability to text an emergency request provided a sense of empowerment to be able to choose how to report the emergency. However, each of the participants voiced that they were concerned about the time factor regarding the system the police department would use and if the text messages would be answered in a manner similar to the telephone calls.

The PSAP Interim Text-to-9-1-1Support Documents (NENA, 2014b), referenced:

1. The caller will be greeted with the same script that voice calls receive (p. 18);
2. The telecommunicators should ask the caller if they can call in by voice. (If it is safe to do so; p. 18);
3. The nature of the call will be asked for and the appropriate call-types entered into the call. Once a call is classified, it will be routed for dispatch to the appropriate unit; p. 19);
4. Calls shall be prioritized based on the nature of the call, whether voice or text (p. 21);
5. Multiple text sessions will be prioritized in the same manner as 9-1-1 calls. The highest priority Text-to-9-1-1 call will be determined by the nature of the emergency. Make sure you respond to each message and ensure, if multiple text

are received about the same call, that they are indeed the same and not a different call (p. 20).

Research Subquestion 4

I asked police officers, police dispatchers, and police call-taker participants to provide an instance, relative to their work environment, where a change implementation proved successful or where the change implementation proved unsuccessful. The participants' responses provided data relevant to perspectives regarding what can assist a positive introduction of text messaging into the emergency reporting process. The responses further informed research subquestion 4 regarding how a change processes orchestrated efforts can influence successful transition involving text message initiated reports for emergency response. Figure 10 summarizes the participants' responses relevant to the concepts confronted in change; the figure depicts that positive elements will inspire a successful change.

Figure 10. Concepts confronted in change.

Interview questions posed to call-takers and dispatchers included “How did you learn to be a call-taker or dispatcher?” and “When you were learning to be a call-taker or dispatcher what was the most memorable event you recall when learning the process that stands out in your mind?” All the call-takers and dispatchers responded that they had undergone extensive training occurring both in a training classroom and on the dispatch floor. See Figure 11 for memorable events during the learning of the job. An interview question to citizens included “How did you learn to make a police emergency 9-1-1 call?” One of the four citizen participants responded that they could “recall a public service announcement many years ago.” Two of the four citizen participants responded that they had “frequently seen signs or the side of a police car with the words to ‘Call 9-1-1” and the final citizen study participant responded that they “had seen their parent(s) dial 9-1-1 for an emergency and recalled her parents teaching her.” The same participant stated, “Using the Internet/Pintrest/YouTube would be a good learning tutorial for citizens to use wireless device text messaging.”

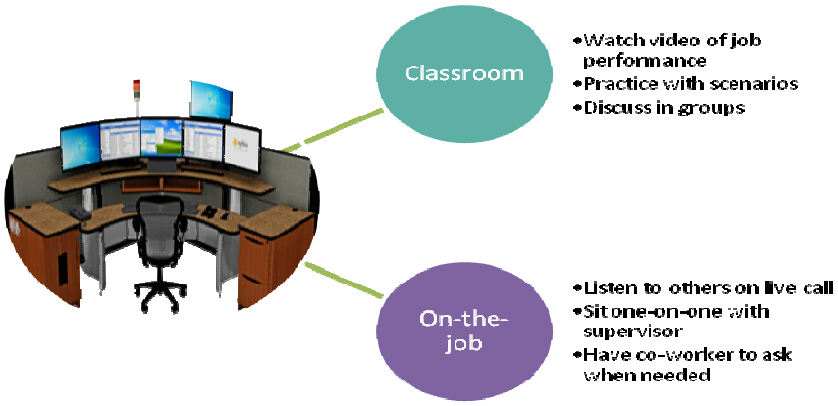

Figure 11. Job Learning.

Citizens responded to the interview question "What aspect of the texting technology do you believe should be given the most consideration?" The responses ranged from call-takers being knowledgeable of texting lingo such as acronym use, short cuts, and spelling. The citizens' concern was also regarding receiving an auto-confirmation message that the call-takers received the message or that message delivery was unsuccessful. The citizens also responded that multiple messages between them and the call-taker would delay needed police response. The citizens further responded to the interview questions as to what would happen if they were not able to respond to any reply message the call-taker sent. The call-takers responded to the same interview question and pinpointed issues of concern regarding technical difficulties with equipment, issues on part of service provider, unclear messages from the citizens and how that might negatively affect response and the citizen's safety. Call-takers further responded that keeping up with technological advancements to assist citizens in obtaining needed police services is innovative for the police department and provides another avenue to deliver services.

NENA (2014a) published a *Public Education Program* highly recommended to accompany the implementation of messaging to the PSAP to inform the public of operational perimeters the PSAP may adopt. The public education program should emphasize:

1. Encourage the public to place a voice call to 9-1-1, if at all possible (p. 11);
2. Iterate to the public those factors that may cause a text message to take longer to process than a voice call (p. 11);

3. Texting is not always instantaneous (p. 12);
4. In most instances text messaging does not carry location information; therefore, it should be provided in the first text message requesting help (p. 12);
5. Supply information on which carriers provide Text-to-9-1-1 service (p. 12);
6. Fees related to sending messages could apply based upon the individual device owner's service plan (p. 12).

NENA (2014a) further provided PSAP Management considerations that included:

1. Prior to accepting Text-to-9-1-1, a call traffic study should be conducted to benchmark current call volume to existing staffing levels (p. 10);
2. When a PSAP makes the decision to accept Text-to-9-1-1, a training curriculum will need to be developed that addresses introduction to common texting lingo (p. 10);
3. PSAP management should take into account all functions of the call taker / dispatcher (p. 11);
4. Use of pre-programmed messages (p. 11);
5. Determine a procedure to identify an abandoned text call that includes a call center pre-defined duration of no response (recommendation not to exceed 15 minutes) (p. 11);
6. Increase training in written communication vs. verbal; continued hands-on practice, develop techniques on how to be assertive with written

> communications; find methods to take control of the conversation and situation at hand (p. 11).

Central Research Question

Research subquestion 4 sought to provide the participants' perspectives of how might wireless device text messaging communication impact San Antonio Public Safety Answering Point (PSAP) stakeholders and public safety emergency reports for police response. During the interview phase, police officers responded to "If the Police Call-taker receives any emergency call via a text message, how do you believe the change in communication will affect the information you receive from the police dispatcher?" The focal point that emerged from the police officers' responses included the primary information received will be sketchy and not contain sufficient data to ascertain the emergency scene which will cause increase need to contact the dispatcher for additional details. The police officers also hinted that like any new process involving human interaction with technology there would be a period of adjustment.

Responding to the interview question, "How do you feel texting will effect reporting an emergency request?" police call-takers cited unsure feelings regarding what information the citizens will send, if the information will be understandable, what if they as the call-taker interpret something incorrectly, and how much should the call-taker assume (referencing missing or misspelled words). Though the call-taker's responses varied, the final reference to the citizens obtaining needed services in a timely fashion remained consistent. Responding to the interview question, "How do you feel texting will effect reporting an emergency request?" all police dispatchers commented that texting

format may be too brief to supply all pertinent and required information for dispatching officers to the scene and ensuring the safety of both the citizen and the officer.

The interviewed citizens responded to the question, "Recall your last call into 9-1-1, how do you feel using a wireless device for texting in an emergency call will change anything that happened during the call?" The resonating response from the citizens surrounded that at this time they do not know what would have changed the situation at hand, but:

- "having a new way to report an emergency is empowering for helping yourself or helping others"
- "like the idea that a new choice is available and knowing that at times each of the methods may be more beneficial and convenient"
- "texting is new and I'll probably wait to try until the process is tested for stability"
- "I will have to wait because I do not always like trying new things"

The SAPD communications office SOP states, in part, "The responsibility and the authority to recommend any policy or procedural changes that will effect a change in communications operations lies with subsequent final approval by the 9-1-1 Coordinator" (p. 15.2).

Section 12.010 of the SAPD Manual (2014) states, in part, that

- The process of receiving, screening, and prioritizing calls for police service, dispatching units and resolving the incident should be one smooth flowing operation (p. 189).
- The success and speed of the operation remain the primary goal (p. 190).

NENA (2013) Information Document for Handling Text Message Calls to 9-1-1in the PSAP operational perimeters states:

> "Text messages are not delivered to its recipient in the same manner as a voice call. Texting, and in particular SMS, was designed as a secondary service within a carrier's network. As a secondary service, it uses the carrier's signaling channels and other resources when the channels are not in use for voice calls, essentially storing the message until network resources are available, then forwarding the text message on to its recipient. This process may cause "a significant delay in the delivery of a Text-to-9-1-1 message to a PSAP" (p. 9).

Summation

Research findings are the culmination of the data collection and data analyses stages and represent principle outcomes of the research study. Evidence of trustworthiness through strategies such as credibility, transferability, dependability, and confirmability established, supported, and exemplified through the research findings. The citizens surmised that the call-taker did not listened to them and the call-taker interrupted them while they were speaking. Police personnel cited emotions within the emergency reporting scenario, emerging from the citizen, as influencing an emergency report for service negatively. Text messaging experiences including auto correct, misspellings,

unsure word meanings, and missing words describe probably negative interaction within an emergency report. Privacy, accommodating and fitting life, and useful for sharing information positively reflected with possible interaction with an emergency report. Elements of adequate training, awareness by all, not rushing, and follow-up successfully influences a positive change process. Cautiousness against receiving sketchy and incomplete information from the citizen and in turn to the police officer highlighted a means how wireless device text messaging communication may affect emergency reports. Chapter 5 includes discussion referencing conclusions, implementations, and recommendations noteworthy for citizens, leaders, and policymakers considerations during the introduction of text messaging in police emergency reporting.

Chapter 5: Discussions, Implications, and Recommendations

Introduction

Discussing new knowledge is a way of inspiring change. As a doctoral Public Policy and Administration Ph.D. candidate aimed upon studying a phenomenon relevant to a societal concern, I concluded the introduction of wireless device text messaging as a method for the citizens to send a 9-1-1 emergency to police call-taking personnel can have far-reaching consequences and warranted discussion. The nature of the study included a qualitative case study inquiry that facilitated data collection through field observations, interviews, documentation, physical artifacts, and recordings to serve the study's purpose to explore the potential use of written communication−via a wireless device's text message−to report a police emergency. Key findings, creating evidence of value (Campbell, 2014, p. 3) included timeliness of the texting method, safety of the citizens and the police officers remaining primary, and the need for collaboration among those involved in the process. As a novice researcher, I hoped to generate accurate, reliable, and reproducible data, through analyses, to increase the body of knowledge (Bird, 2010, p. 695) relevant to the phenomenon to further discussion among citizens, leaders, and policy makers.

Discussion of Findings

The intersecting and bisecting analyzed data merged to form a holistic and evidence-based interpretation of the studied phenomenon. Therefore, the inferences, implications, and conclusions from the research findings can be instrumental to thinking critically about how written language use via the wireless device text messaging

application may change E9-1-1 stakeholder's processes. The strengths, weaknesses, opportunities, and threats that I ascertained through insights and reflections guide and shape a course of action important to the proposed use of wireless device text messaging in emergency operations. The significance of the study lies in the actions taken by the citizens to voice their input, leaders to inspire change, and policy makers to problem-solve and make decisions of societal dimensions.

Research Subquestions 1and 2

Communication, being a fundamental element in this research study, was the main point of the first two of my study's subquestions. The participants' responses to interview questions that established a response to these subquestions established how the study participants viewed an emergency report for service influence on communication and how communication influenced an emergency report for service. The citizens identified speaking, listening, and comprehending as the actions inherent within communication. However, what is to be noted is that what each individual constitutes as speaking, listening, and comprehending may not be identical supporting that "effective communication does not happen automatically" (Jorfi & Jorfi, 2012, p. 2). Police personnel must extract the basic information from the caller (SAPD General Manual, 2014, p. 189) in attempt to process the call timely to ensure citizen safety. Confirmed through observation, the police call-taker did interrupt the caller to obtain the basic information, as the information provided by the caller may not always be accurate (Jasso et al., 2009, p. 265). Effective information exchange being central for timely, efficient, and effective response from a call-taker during a 9-1-1 situation (Chandrasekaran et al.,

2011, p. 733) may require interruption. However, the citizens (30 years old or more) regarded this process as interrupting their component of speaking. Equally challenging in the communication process of emergency reporting is heightened emotions (Warner, 2010, pp. 28-29) substantiated by police call-takers noting emotions, vocal tones, rates of speech, raised voices, vulgarity, background noises, and loudness or lack of loudness as affecting the communication process. Important in the emergency reporting communicating process, to all the citizen participants, was a concern with the timeliness of response by the police officer. However, to police personnel the timeliness hinges upon the extraction of the basic information from the caller as crucial minutes and even seconds during emergency events (Ames & Busch, 2013, p. 80) can save lives.

The broader view of communication, as depicted by the police officer, included the extension of the communication process of speaking, listening, and comprehending as described by the citizens to include responding. The police officer's response includes writing a police report regarding the incident that follow-up detectives will use as part of the case. Therefore, the understanding that emergency reporting, a system in its own, is also part of a larger picture captures the essence of systems theory. Emotions, interventions, and responses innate within humanistic behaviors comprise communication actions pivotal within the emergency reporting process. How communication between individuals must take place in an emergency is not containable to an unyielding definition as humans are unique and possess different outlooks. However, the basic components of what the citizen should relay to the police call-taker should be part of an education plan extended to the citizens.

Research Subquestion 3

Research subquestion 3 focused on the inquiry of how might emergency report initiation and emergency response interaction engage when emergency reports exist in a wireless device's text message format. The participants' personal experiences with texting in a social environment influenced both positive and negative aspects of texting that may extend into emergency reporting texting. The conception that text messaging is a form of communication occurring between well-acquainted parties (Tjora, 2011, p. 198) coupled with Racifi and Dagger's (2010) indication that a lack of research is apparent when examining the role of written communication in a service relationship context (p. 104) provided incentive to study how wireless device texting will merge with police emergency reporting. One of the negative aspects of texting that arose was missing words accenting concerns by police personnel that the sent text message would be lacking vital information that would affect the citizens' safety. In addition to missing words, unsure word meanings causing reciprocal back and forth communication in the texting format would incite delays that would also jeopardize the citizen's safety. Hutchby and Tanna (2008) concluded that text-messaging exchange systematically differs from oral conversation (p. 161). The strikingly difference between texting and oral conversation is that oral communication is synchronous for real-time communication whereas texting is asynchronous which is the relay of information with a time lag (FCC, 2015, p. 2). Substantiating that in text messaging misunderstanding between the sender and receiver can occur, (Perin, 2011, p. 1; Summak, 2014, p. 131) texting would not allow for immediate real-time clarification of discrepancies.

Though the NENA (2014b) referenced that voice calls or text message handling follow similar protocols, some of the guidelines do not seem to take into account the asynchronous texting method of communication between parties (p. 18). If the sender sends information about the emergency, why should the sender receive the same script that voice calls receive? In a voice environment, the caller dials 9-1-1 and when the police call-taker answers, the caller hears "9-1-1, what is your emergency?" In the texting environment, such a greeting defeats the purpose of the sender initially sending relevant emergency information. NENA (2014a) guidelines state, "Telecommunicators should ask the caller if they can call in by voice, if it is safe to do so" (p. 18); however, this action would take place after receiving the initial text from the sender. Such a procedure also seems to be motivating a delay in emergency reporting processing.

The related story, relayed during the conducted interview, of the friend's friend being unable to speak supplied by the police officer, provided a good example of how emergency reports exist in a wireless device text-messaging format in that the texting can exist covertly so others do not necessarily know that the emergency contact occurs. Another example of covert use of wireless device text messaging that can be very helpful happens in cases of domestic violence. An argument continues that just like a voice call texting can have its positives and negatives. However, the added feature of wireless device text messaging into 9-1-1to fit a mobile society and accommodating those individuals preferring the text mode advances citizen empowerment to address their safety during emergencies. Historically, the inception and evolution of the current-day E9-1-1 reporting system resulted from a process defined by the need to shape a necessity

within society. The infancy of wireless device text messaging for emergency reporting must mature into a norm within society and until then just as any new process growing pains will occur; however, in an emergency reporting environment, the foremost trepidation is the safety to lives and property.

Research Subquestion 4

The discussion of how the change process can be orchestrated in efforts to influence successful transition involving text message initiated reports for emergency response involves receiving adequate training, ensuring awareness by all, not being rushed, and holding follow-up sessions distinguish a successful change process according to police personnel. The successful change process facets provided by the respondents came from previous experiences. Awareness by all iterates the fact that change does not exist in a vacuum. To achieve awareness by all stresses the need for instruction or training. Call-takers and dispatchers said that they learned to do their jobs through training. Learning how to operate equipment and communicate effectively with citizens verbally required training; therefore, learning how to operate equipment and communicate effectively with citizens through written communication wireless device texting should include training. NENA (2014a) set out the guideline to "increase training in written communication vs. verbal" (p. 11); however, the amount and extent of training remains a responsibility for PSAP leaders. Training and instruction further extends to the citizens. The citizens responded that they recalled public service announcement many years ago providing instruction of calling 9-1-1, seen decals on the sides of police cars to dial 9-1-1 in case of emergency, or simply learned how to reach emergency responders

by watching others dial 9-1-1. Instruction on the preferred methods of using text messaging as a CCM to contact police call-takers must include education extended to the public. Using methods that appeals to a technologically minded and generational users through public announcements not just on television but video instruction on utube and Pintrest increases visibility and awareness.

Positively exchanging messages and signals (Zuidema & Verhagen, 2010, p. 58) promotes individual's reaching mutual agreements in communication. Language, recognized in the TCA, is the foundational component in society to forge interchange between actors for beneficial transactional outcomes (Habermas, 1984, pp. 25, 95, 131-132). The participants engage in multidimensional processes of uniquely intrapersonal and interpersonal human activity through the exchange of information (Kernstock & Brexendorf, 2009, p. 390) where the individual's perceptions reflective of peoples' thoughts, meanings, and requests reflect through the communication (Zuidema & Verhagen, 2010, p. 59). Therefore, bringing together a range of individuals with a stake in text messaging use for emergency reporting helped to uncover the uncertainty and the vulnerability associated with the adoption of reporting emergencies via the use of written language through wireless device text messaging (McDonald et al., 2012, p. 65). Through collaboration, the uncertainties uncovered through the interview phase which included the use of texting lingo such as spelling shortcuts, confirmation of received sent message, processing delays, possible unresponsiveness, equipment technical difficulties, and unclear received messages can be solved. Viewed positive and innovative, wireless

device text messaging serves as a technological advancement to keep up with life's mobile lifestyle.

Central Research Question

As I realized from the collected and analyzed data the phenomenon of introducing wireless device text messaging from citizens into the reporting of police emergencies, the contextual elements of public safety, technology, language use, emergency reporting, and change-management enter into the overall culmination of the systematic process. However, language use stood out as the overall ingredient that would steer the successful incorporation of the texting feature. An increase in the need for clarification due to sketchy and incomplete information, understandable information due to missing words, sufficient information, and how much interpretation the police call-taker should assume figured into the concept of language use. Timely police response and safety stood out as main concerns, which is usual during emergencies. Though new processes can instill concern, NENA (2014b) advertised, "texting is not just nice to do. It is a need in the community. Please don't be afraid of it" (p. 29). Empowerment was a pattern in the citizens' outlooks and police personnel commonly cited the adjustment to the process with emphasis on the technology aspect. The various evidence gathered through data collection and analyzed in response to the central research question of how wireless device text messaging communication might affect San Antonio Public Safety Answering Point (PSAP) stakeholders and public safety emergency reports for police response informed my study.

Discussion of Findings Review

Systematically investigating how incorporating wireless device text messaging in an inductive style of discovery included the study of materials and sources such as operational procedures of the call-taking and dispatching functions, the police department general manual and archived ordinances relevant to the police safety environment. Additional sources for collected data included observations, interviews, and audio recordings. The collected data analyses resulted in research findings of established facts. Through the discussion of the research findings, conclusions based upon the study's research questions culminated in new conclusions pertinent to the study topic.

Collaboration, communication, cooperation, and coordination with others is essential (Berryman, 2010, p. 24) and strongly resonated. During collaborative endeavors, stakeholders infuse differing views and contribute perspectives that ignite and fuel conversation and debate for critical appraisals such as input into the NG9-1-1 text messaging process where implications will affect public services (Daniels et al., 2011, p. 4). By engaging a systems-thinking undertaking as well as through the collaborative sharing of the stakeholder's contributive perspectives, stakeholders can garner a holistic viewpoint by considering the entwining and connecting of other stakeholder's actions and reactions. Gaining understanding from others, building on existing knowledge, and not reinventing the wheel are intricate inclusions when advancing a model of conceptual change with theoretical underpinnings.

Limitations of the Study

The amount of E9-1-1 calls placed to the PSAP in 2014 totaled 1,270,961 (see Table 1). Statistics from the SAEDF (2014) reported the San Antonio race population as 54.87% Hispanic (p. 3) and less than 3% of the received calls, into the PSAP, include Spanish-speaking only callers. Only English-speaking calls were included in the study and construed as a limitation. However, since only 3.33% of the San Antonio Hispanic does not speak English (SAEDF, 2014, p. 4) though a portion of the Hispanic English-speaking population may still prefer to speak Spanish, the exclusion of Spanish language users does not affect the study's internal validity or reliability. However, the exclusion is a limitation if wireless device text messaging with no language limitations is included in the proposal to offer text messaging in emergency reporting.

The study population of the police call-takers and police dispatchers was limited to those employees possessing more than 6 months of SAPD PSAP experience. Perspectives of employees with less than six months experience and not past their probationary periods may have omitted some possible insights; however, the availability of study participants or incoming calls available for this study did not deteriorate the finding results. The completion of this study in a timely manner required my avoiding participants dropping out, becoming ineligible due to employment termination, and thusly steered my decision to exclude certain potential participants. The included study limitation did not affect the trustworthiness of this study.

Recommendations for Further Study

Included in the scope of NG9-1-1nonvoice features and services consists of multi-media (e.g., pictures and video clips) (NENA, 2014b, p. 1) and a continued study revolving around the inclusion of pictures and video clips enhancing a voice or text message communication contributes to a scholarly forum to increase a knowledge base. With the technological advancements to support text messaging, the ESInet is in place. Supporting video and images (Berryman, 2010, p. 22) in the emergency reporting process sustains the emergency services community that has a desire to have multimedia emergency services supported with the same general characteristics as emergency voice calls (NENA, 2014b, p. 1); therefore, further research is warranted to understand how picture and video messaging merge within the emergency reporting process.

NENA (2014b) offers that "in most instances text messaging does not carry location information; therefore, it should be provided in the first text message requesting help" (p. 12). Jasso et al. (2009) researched how spatiotemporal patterns of 9-1-1 calls leads to increased accuracy of the presence and location of emergency events" (p. 265). NENA's (2014a) Public Education Program additionally imparted entities offering wireless text messaging should "supply information on which carriers provide Text-to 9-1-1 service" (p. 12). Through further research, the establishment of facts and conclusions relevant to increase public safety and enhance PSAP emergency response will encourage the need for caller-id in text message delivery as a "detection procedure that work in cases where the emergency event generates a small but statistically significant increase in the number of 9-1-1 calls" (Jasso et al., 2009, p. 265). Service providers should also

receive the message to be encouraged to offer the text message integration with local law enforcement.

Implications for Social Change

Wireless device users in society numbered 326.4 million users in 2012 and the same year the number of generated text messages reached 2.19 trillion (CTIA, 2013, p. 3). In modern-day society, the wireless device has significantly contributed to the technological change in society. Technological change, in society, in turn, advances social change. Social change may be in social goals, objectives, and values (Bano, 2014, p. 773). With the number of wireless device users, is it any wonder that the application of the text messaging function within an emergency reporting environment for the citizens in society to contact public safety personnel for assistance possess the magnitude to steer social change especially as society embraces wireless device text messaging use as a popular and acceptable means of communication? Logically, law enforcement personnel cannot be in all places all of the time; therefore, emergency reporting by victims and witnesses of the criminal activity will increase the intelligence gathering required in police investigation and resolution by adding eyes and ears in aiding to report criminal and suspicious activity. Equally relevant and important is the acknowledgement that text messaging offers an additional safety mode for reporting emergencies especially in situations where the absence of sound of a telephone call increases the victim's security. The use of texting in NG9-1-1 provides an avenue for increasing social responsibility in the individual, family, organizational and societal/policy levels by encouraging, benefiting from, and aiding humanity through the reporting and responding of emergency

events. San Antonio citizens, COSA police emergency personnel, and COSA governmental officials will prosper from the study.

Public Policy and Leadership

Operating in vacuums and creating silos, especially in the pursuit of public ventures, can create barriers to change. Unidentified procedural processes addressing wireless device text messaging use within the SAPD communications unit's PSAP SOP provides stakeholder input for comprehensive understanding and collective action to legitimize the process (Trousset et al., 2015, p. 46). The practical experience and perspectives of individuals directly engaged in a phenomenon creates a distinctive level of reality when considering outcomes and possibilities (Trousset et al., 2015, p. 48). Therefore, public policy leaders responsible for shaping and informing policy recommendations (Kos, 2010, p. 97) can incorporate problem solving, decision-making, and strategic planning (Mattson et al., 2011, p. 111) to increase informed knowledge. Social science research can highlight challenges and identify human behavioral points of views for plausible interventions (Teller, 2013, p. 1). Research studies and findings offer legitimization.

At a minimum, four entities, counties, or jurisdictions deployed Text-to-9-1-1 services around the nation. Public leaders can take advantage of acquiring knowledge and reviewing lessons learned from other locales deployment of the wireless device texting feature. Monroe County 9-1-1 New York uses a Web portal available at the call-takers consoles as opposed to a separate terminal dedicated to text messaging interface. Monroe County used press conferences during the deployment and about a month after

deployment to keep the public informed. Web portal volume checking occurs at the beginning of each shift to ensure hearing the received text along with a test text message. PSAP call-takers were initially worried they would not be able to provide level of service to either phone or text but now it is pretty run of the mill for them. In the state of Vermont, one PSAP takes all text messages for the remaining eight PSAP's in the state. Radio and TV public service announcements along with an utube page provided information on how to text 9-1-1. In the state of Maine, two of the 26 PSAP's are taking texts for the state. The Maine facilities did not have Internet installed at the call-taker positions but instead interfaced with existing TTY capabilities. The North Central Texas Council of Governments Regional 9-1-1 program encompasses 44 PSAP's and 33 are text ready. Thirty days after each county has deployed the feature they held a public announcement where they invited the local newspapers, city officials, business owners, and first responder personnel to attend. Part of the public announcement included a live demonstration. All telecommunicators are required to attend one-hour training (NENA, 2014a, pp. 1-2). Leadership should use all mechanisms at their disposal to engage collective decision-making and guide individual behaviors to promote the overall safety, well-being and prosperity of the community.

Summation

Societal transformation, within the emergency reporting process through the transpiration to written communication from oral communication, with the introduction of wireless device text messaging leaves a gap in the literature and current public policy and PSAP operational processes. Change within processes is not always easy. The gained

perspectives from individuals who have placed an E9-1-1 emergency report as well as police department employees responsible for actions after the call produced patterns and themes relevant to the change. Through increased knowledge, understanding, and structure, change can become easier and risk minimized.

Differences in communication styles, processes, strategies, and practices exist between oral and written communication (Cheng & Seeger, 2011, pp. 64-76). The differences in communications are life-critical during police emergency reporting, however, the need for clarity and a clear message is equally importance in everyday memos, e-mails, business letters, and other correspondence. The study of the proposed incorporation of text messaging in emergency reporting led to research findings, discussions, conclusions, and implications to aid in the societal phenomenon. Through contemplative, informed and analytical discussion, in a reflective and systems-thinking (Huebner et al., 2008, p. 213) philosophy, central elements (written language use, wireless device text messaging, change-management, technology, emergency reporting, and police public safety) of the transformation can assist in policy-building initiatives relative to the societal happening. Helping to shape and influence public policy is a responsibility of both individuals and groups through education, advocacy, and mobilization (Kilpatrick, 2015, p. 1). In the emergency reporting arena, accepting the responsibility can result in saved lives.

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Appendix A: Ordinance

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PB:cm
03/24/88

AN ORDINANCE 66839

APPROVING AN INTERLOCAL COOPERATION AGREEMENT FOR SERVICES BETWEEN THE CITY OF SAN ANTONIO AND THE BEXAR METRO 911 NETWORK DISTRICT.

* * * * * * * *

WHEREAS, the Bexar Metro 911 Network District was created pursuant to authority granted in Article 1432c, Vernon's Texas Civil Statutes, to establish the number 9-1-1 as the primary emergency telephone number for use by local governments in Bexar County and to improve emergency communication procedures and facilities in a manner that makes possible quick response to any person seeking police, fire, medical, rescue and other emergency services; and

WHEREAS, local governments within Bexar County, including the City of San Antonio, participate in the 911 emergency service; and

WHEREAS, it is the desire of the City of San Antonio to assist the Bexar Metro 911 Network District in the provision of administrative services to operate the District and thereby promote efficiency and improve emergency management and response capability of public safety agencies through planned sharing of resources and expertise; NOW THEREFORE:

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANTONIO:

SECTION 1. The City Manager is hereby authorized to execute an Interlocal Cooperation Agreement between the City of San Antonio and the Bexar Metro 911 Network District providing certain administrative and operational services described in Exhibit A, attached hereto and incorporated herein for all purposes.

SECTION 2. There is hereby established a 911 District Fund No. 81-001 for financial reporting and accounting purposes in relation to District operations.

PASSED AND APPROVED this 24th day of March 1988.

Henry Cisneros
M A Y O R

ATTEST: Norma S. Rodriguez
City Clerk

APPROVED AS TO FORM: Tom Finlay
City Attorney

88 14

Appendix B: Open Records Request

Did you know you can request information online from the comfort of your own home? Simply go to the city website at www.sanantonio.gov , select the '**Request a City Record**' icon, select the '**Submit a Request**' icon and follow the steps. If you do not have access to a computer, please feel free to submit this form as your request.

Please print clearly and include as much information as possible to ensure this request is processed efficiently.

Date of Request: _____

Name of the Requestor: _____

Requestor's Email Address: _____

Requestor's Address: _____

City: _____

State: _____

Zip Code: _____

Requestor's Phone: _____

Requestor's Company Name: _____
(If Applicable)

SAPD Case Number: _____
(**Very Important – This is usually provided by an SAPD Officer on a business card on the day of incident**)

Date of the Incident that you are Requesting: _____

Approximate Time of the Incident you are Requesting: _____:_____am / pm
(Circle one)

Name and Date of Birth of Complainant, Victim or Drivers Involved: _____

_____

The Phone Number Used to Dial 911: _____
(If Applicable)

The Address, Block or Intersection of Where the Police were Dispatched to: _____

_____

_____

I Want: an Offense Report / an Incident Report / a Traffic Accident Report
(Circle All that Apply)

If the information you want is not an above listed option, please give a detailed description of the information that you seek:

_____

_____

_____

_____

I would like to receive the information by: Email / US Mail / I Will Pick Up (Circle One)

The San Antonio Police Department Records Office will make every effort to get the information that you request to you immediately. The amount and volume of requests received by the Records Office varies. If the request can not be met within ten (10) business days (excluding weekends and holidays), the Records Office will notify you with a reasonable date of expectancy

Appendix C: Authorization Letter

San Antonio Police Department

Interoffice Correspondence

September 9, 2015

TO: Ms. Deborah Almendarez, Administrative Assistant II

FROM: Chief Anthony Trevino, Chief of Police

CC: Ms. Olga McDonald, Communications Office Manager; Employee's 201 File

SUBJECT: Letter of Cooperation

Ms. Almendarez, you are hereby granted authorization to conduct recruitment and data collection in support of your study entitled Exploring the Use of Texting within San Antonio Texas Police Emergency Reporting at the San Antonio Police Department (SAPD) Public Safety Answering Point (PSAP). SAPD employees' consent to participate within your study is voluntary and at their own discretion. The following restrictions apply:

- Recruitment of SAPD employees, as study participants, must occur during employee-authorized morning, lunch, or evening work breaks.
- Data collection must not interrupt employee's work duties. You and your research assistant must take approved personal or annual leave during the observation periods.
- Study participant interviews or follow-up interviews must not take place within SAPD facilities.

The City of San Antonio and the San Antonio Police Department assumes no responsibility within the course of your research study. Access to recruitment and data collection may be withdrawn, for just cause, if you do not adhere to the listed perimeters. I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of your supervising faculty without permission from the Walden University Internal Review Board (IRB).

As a member of the department and as a long-time acquaintance, I applaud your continual educational endeavors. The review your research proposal is in line with department values. I confirm that I am authorized to approve research in this setting and that this plan complies with the SAPD organization's policies.

Anthony Trevino

Chief Anthony Trevino
San Antonio Police Department
315 S. Santa Rosa, San Antonio, Texas 78207
210-207-7360

SAPD Form 65 ver. 2 (Jun 2007)

Appendix D: Notification Flyer

To: Police Call-takers and Police Dispatchers

Subject: Recruitment for Voluntary Study Participants

I am working on a doctoral dissertation, at Walden University, entitled "Exploring the Use of Texting within San Antonio Police Emergency Reporting" and I invite you to participate in my research.

As a study participant, you have the right to ask questions and be completely informed about the study prior to volunteering. I will be available for informational sessions to be held here in the break/lunch room, on:

Tuesday November 10 @ 0710-0725; 1715-1730
Wednesday November 11 @ 1515-1530
Saturday November 14 @ 2025-2040; 2110-2125
Sunday November 15 @ 1235-1250; 1515-1530
Monday November 16 @ 0630-0645; 1235-1250

Police call-takers and police dispatchers having completed their probationary period and have experience texting on a mobile device are invited to attend an informational session before work, during break, during lunch, or after work. Please contact me for any additional information you require.

Thank you,

Deborah L. Almendarez
(Address)
(XXX)XXX-XXXX

Script for direct contact with potential study participants/informational session:

As a student at Walden University working toward completing my doctoral studies, I must complete a research study. Communication existing in a text exchange differs from a conversation and I have chosen to study the change occurring when Text-to-9-1-1 technology is offered to citizens to report police emergencies into the Public Safety Answering Point (PSAP). My study is entitled "Exploring the Use of Texting within San Antonio Police Emergency Reporting."

If you have completed your probationary period, you are invited to volunteer as a study participant. Data collection for the study involves observation of the police call-taker as you perform your normal daily task of responding to citizen's incoming calls. As the observer, I will not interfere with any of your duties, I will just be observing you and taking notes while you do your job. The notes will consist of your actions while you speak to the citizen for the duration of the call. Call-takers and dispatchers will also be interviewed and asked approximately 13 questions ranging from how you learned to perform your duties to your perceptions regarding change. The interview session will take approximately 30 minutes and will be arranged at a time and place convenient to you.

Do you have any questions? Do you have any concerns? You may contact me at (XXX)XXX-XXXX if you are interested in participating in this research. I appreciate you attending and thank you for your time.

Deborah L. Almendarez
(Address)

Appendix E: Police Officer Flyer

Date: _____

SAPD Officer

My name is Deborah Almendarez and I am working on completing my doctoral degree at Walden University. I am conducting an exploratory research study surrounding the use of texting within San Antonio police emergency reporting. My study involves interviewing police officers recently responding to a citizen's 9-1-1 emergency request.

You recently responded to a 9-1-1 call that I am using for a case study. Will you please help me complete my research study? Participation in this study is voluntary. Your participation will include a 30-minute interview session that involves answering eleven (11) questions ranging from what you feel is the biggest difference between communicating in spoken words and written words to your interaction with citizens at the emergency scene.

Please contact me at (XXX)XXX-XXXX (call or text) if you have any questions or concerns regarding voluntary participation consent in this study and/or to arrange an interview. The interview will be conducted at a location convenient to you. **Department and study requirements include that you only contact me during your off hours (i.e., before or after work or on your RD's).** Thank you for adhering to the requirement.

Deborah L. Almendarez

Appendix F: Citizen Flyer

My name is Deborah Almendarez and I am a doctoral student at Walden University. I am conducting an exploratory research study surrounding the use of texting within San Antonio police emergency reporting. My study involves interviewing citizens who have placed a 9-1-1 call as well as possessing experience with texting on a wireless device. Are you a San Antonio citizen and do you have experience calling 9-1-1 and texting on a wireless device?

If citizen responds no, thank them for their time.

If citizen responds yes, ask them if they will assist you in your research and hand them a flyer. As you hand the citizen the flyer:

- explain that their involvement will include a 30-minute interview session consisting of questions ranging from positive and negative experiences dealing with texting to how they learned to place a 9-1-1 call
- that the interview session will be arranged at a time and place convenient to them
- that your contact telephone number is included in the flyer
- ask the citizen if they have any questions at this time,
- thank them for their time

Text-to-9-1-1

1. Are you a San Antonio citizen?
2. Do you have experience texting from a wireless device?
3. Do you have experience calling 9-1-1?
4. Will you help me complete my research study for my doctoral degree?

Please call or text me at (XXX)XXX-XXXX if you have any questions and to arrange an interview time.

Thank you,
Deborah L. Almendarez

Appendix G: Generated Codes

Call	CALL
Change	CHA
Communication	COMM
Corroboration	CORR
Education	EDU
Emergency	EMER
Emotions	EMO
Empowerment	EMP
Help	HELP
Language	LAN
Movement	MOV
Safety	SAF
Technology	TEC
Texting	TXT