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Distance Learning for Professional Development in Law Enforcement - What Works

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DISTANCE LEARNING FOR PROFESSIONAL DEVELOPMENT IN LAW ENFORCEMENT – WHAT WORKS

by

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"Commit your actions to the Lord, and your plans will succeed."

Proverbs 16.3

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Abstract

Online distance learning is an essential element in the continuing education of law enforcement officers across the nation. However, little research has been conducted into the use of learning management systems by law enforcement agencies as a tool for professional development. This study attempts to assess the attitudes, preferences, and influences that impact distance learning for professional development work for state law enforcement officers and their agencies. Law enforcement agencies and law enforcement training centers have failed to utilize or embrace distance-learning technologies, or they have adopted distance-learning technology without knowing the effectiveness of the training or learning. For adult learning to be active, the learner must embrace the subject and the training delivery method. The law enforcement profession has historically used traditional classroom lectures for education and hands-on demonstration for training. This study focuses on the attitudes, preferences and other factors that influence the use of distance learning for professional development by state law enforcement officers.

This study incorporated an online survey of 496 Florida state law enforcement personnel employed by the Florida Highway Patrol and the Florida Fish and Wildlife Commission, Division of Law Enforcement. The survey consisted of 64 questions that were analyzed and results into categories of descriptive demographics, work-related, reading and writing skills, technology use, software use, self-belief, self-management, ease of use, and learning preference for a review of factors that influence the attitudes and perceptions of state law law enforcement personnel on the use of learning management systems for profession development learning.

This quantitative study revealed wireless connectivity variations between metropolitan and rural counties does not influence the perception or attitude of state law enforcement

personnel on the use of a learning management system. The also revealed the learning management system does not influence their perception of online, classroom or blended learning for professional development. This research also revealed little correlation to age, race or national origin, sex, and years of experience to the preference for a learning management system for distance learning. The research suggests that level of education does not influence the attitude or perception of users on the use of a learning management system but personnel who are certified instructors do have a stronger preference towards the use of a learning management system for professional development learning. The duty assignment of patrol, investigations, supervisory and administrative, or other duties does not influence the attitude or perception of users of a learning management system.

CHAPTER 1

Introduction

Technology has and will continue to change how we live our lives, how we work, and how we gain knowledge. Law enforcement has embraced technology to gather data, assimilate the data into information, and disseminate the information as useful intelligence. In the October 2016 issue of *The Police Chief* magazine published by International Association of Chiefs of Police (IACP), Nancy Rodriguez, Director of the National Institute of Justice, and Chris Tillery, Director of the Office of Science and Technology, National Institute of Justice, highlighted the importance of technology in law enforcement with the statement, "To the greatest extent possible, agencies should engage with the communities that they serve when considering the adoption of a new technology, both to inform the community members and to gain their input, particularly in regard to technologies that can be perceived as having an impact on privacy."

While minority groups in the United States have the perception that law enforcement officers are biased, poorly trained, and uncaring (United States Department of Justice, n.d.), it is vital that all first responders, especially law enforcement, be well trained and educated. The training and education must be timely, appropriate, accurate, and comprehended by law enforcement officers. The officers must receive actionable information that will translate into a safer community for everyone.

Much of the information on law enforcement training and education is derived from analysis of metropolitan police agencies along with community and state colleges that provide law enforcement education and training (Johnson, 2010). Little research has been conducted on the use of distance-learning technology and applications for the in-service or professional development of law enforcement personnel across the country. Distance-learning used for

professional development training and education of law enforcement has been implemented to address budget deficits, staffing shortages, and for convenience without consideration of the effectiveness, efficiency, or learning comprehension (International Association of Chiefs of Police). Most distance-learning programs in law enforcement lack feedback from and support of students, leaving the students with gaps or misunderstandings in their training and education. Law enforcement and higher education share a common problem of increased learning demands with shrinking budgets (Zumeta, Breneman, Callan, & Finnery, 2010).

Traditionally, police agencies in conjunction with law enforcement training academies associated with community or state college have controlled the curriculum. Subject matter experts who may or may not have any formal andragogy, which can be described as the art and science of helping adults learn (Knowles, 1970), have delivered the training through traditional classroom lecture. The move from traditional classroom lecture to web-based technologies can influence the instructors' teaching style and have a significant impact on student learning. This move in technology can vary from uncomfortable to unachievable considering traditional classroom teachers must learn to teach in ways very different from the previous classroom experience. This resistance to embrace and understand technology can hamper the application of distance-learning technologies (Beaudoin, 1990: Jaffee, 1998; Maguire, 2005; Schnackenberg, 2009). For this research, the term in-service and professional development training is being used interchangeably. Peter Rickman (2017) stated in a *Philosophy Now* article titled Education versus Training that "Training is about practice, about skill, about learning how to do things. Education is about fostering the mind, by encouraging it to think independently and introducing it to the knowledge of the physical and cultural world" (para 1). Professional development training for law enforcement officers involves the introduction and education of personnel to

theory and how to translate the newly acquired knowledge into a working skill that will be used in their daily encounters and interactions with the citizens they serve. However, one consistent factor in law enforcement is no two situations or encounters are the same and officers must think independently in the application of knowledge and skills. State law enforcement agencies are paramilitary organizations and prefer to use the term in-service training. However, local law enforcement agencies who use community colleges for training generally use the term professional development. However, they both refer to the ongoing training of sworn law enforcement personnel once they have become certified law enforcement officers.

Understanding the Law Enforcement Culture

As with most organizations, law enforcement has its own unique culture, vocabulary, and acronyms. It is essential to understand the uniqueness and culture of law enforcement to understand the importance of this research fully.

Florida Statutes 943.13 Officers' minimum qualifications for employment or appointment details the minimum requires to become a law enforcement officer in the state of Florida. The candidate must be (1) at least 19-years of age, (2) a citizen of the United States, (3) high school graduate or equivalent, (4) not convicted of any felony or a misdemeanor involving perjury or false statement, and (5) not received a dishonorable discharge from the Armed Forces of the United States. Officers must pass a physical examination by a licensed physician, physician assistant or certified advanced registered nurse practitioner based on the criteria established by the Criminal Justice Standards and Training Commission (CJSTC) coupled with a rigorous physical agility test. Florida statutes 943.11 (Department of Law Enforcement Act (2005) establishes the 19-member Criminal Justice Standards and Training Commission that is also known as the Commission. The Commission is charged with the responsibility for establishing

and maintaining standards and training for all law enforcement and correctional officers in the state of Florida. The Commission establishes the Basic Recruit Training Program (BRTP) through Florida Administrative Code 11B-35.002. Effective July 1, 2015, the BRTP consisted of 770 program hours. Personnel seeking to become a police officer in the state of Florida must complete the 770-hour program at one of the approved training academies located in Florida. At the successful completion of the basic recruit training program, candidates must complete a certification examination administered by the Florida Department of Law Enforcement.

Florida law enforcement and correctional officers must complete a minimum of 40-hours of retraining every 4-years. The current mandatory retraining curriculum consists of (1) Human Diversity Interpersonal Skills, (2) Officer Use of Force Training, (3) Firearms Qualification, (4) Domestic Violence, (5) Juvenile Sexual Offender, and (6) Discriminatory Profiling and Professional Traffic Stops. In addition to the topics previously listed, personnel must complete training and education contemporaneously with changes in law and policy.

Most law enforcement agencies are paramilitary or quasi-military in their organizational structure and delegation of authority. The management approach to leadership in most police organizations is authoritarian with strict adherence to the chain of command (Gaines & Worrall, 2012). Law enforcement agencies in the United States are very hierarchical in command with a very defined span of control for each command. Law enforcement agencies use the unity of command principle that places only one superior in command or control of every incident, situation, and employee. To achieve the unity of command agencies are divided into three or four general divisions. Each of these divisions may have hundreds of personnel, or it may be a single person, depending on the size and responsibilities of the agency. The major divisions used by most agencies are Patrol, Investigations, Support Services, and Administration. Some smaller

agencies may combine the function of Support Services and Administration (Gaines & Worrall, 2012). The Support Services component is responsible for the management and storage of evidence and property, police communications, inspections section, auxiliary and reserve personnel, fleet management, and police communications. Many police agencies use civilian personnel to staff many of the positions in the Administrative and Support Services components (Maguire, 2003).

State Law Enforcement Division of Work

Law enforcement duties and responsibilities of a state law enforcement officer are very different from local law enforcement. Most state law enforcement agencies have their area of expertise such as the Florida Highway Patrol is known for being experts in traffic enforcement, traffic crash investigation and crash reconstruction. The Florida Fish and Wildlife Conservation Commission is known for its expertise in boating safety and all wildlife issues. With local law enforcement agencies, the call for service will come from a citizen or visitor to their jurisdiction. However, with state law agencies, the call for service may come from the local law enforcement agency who is requesting personnel or investigative resources. State law enforcement in Florida does not exercise original jurisdiction of calls unlike state law enforcement agencies in other parts of the United States. For instance, if you lived in rural Connecticut, outside of an incorporated city and there was a domestic violence call, the complainant would contact the Connecticut State Police, and a Trooper would respond.

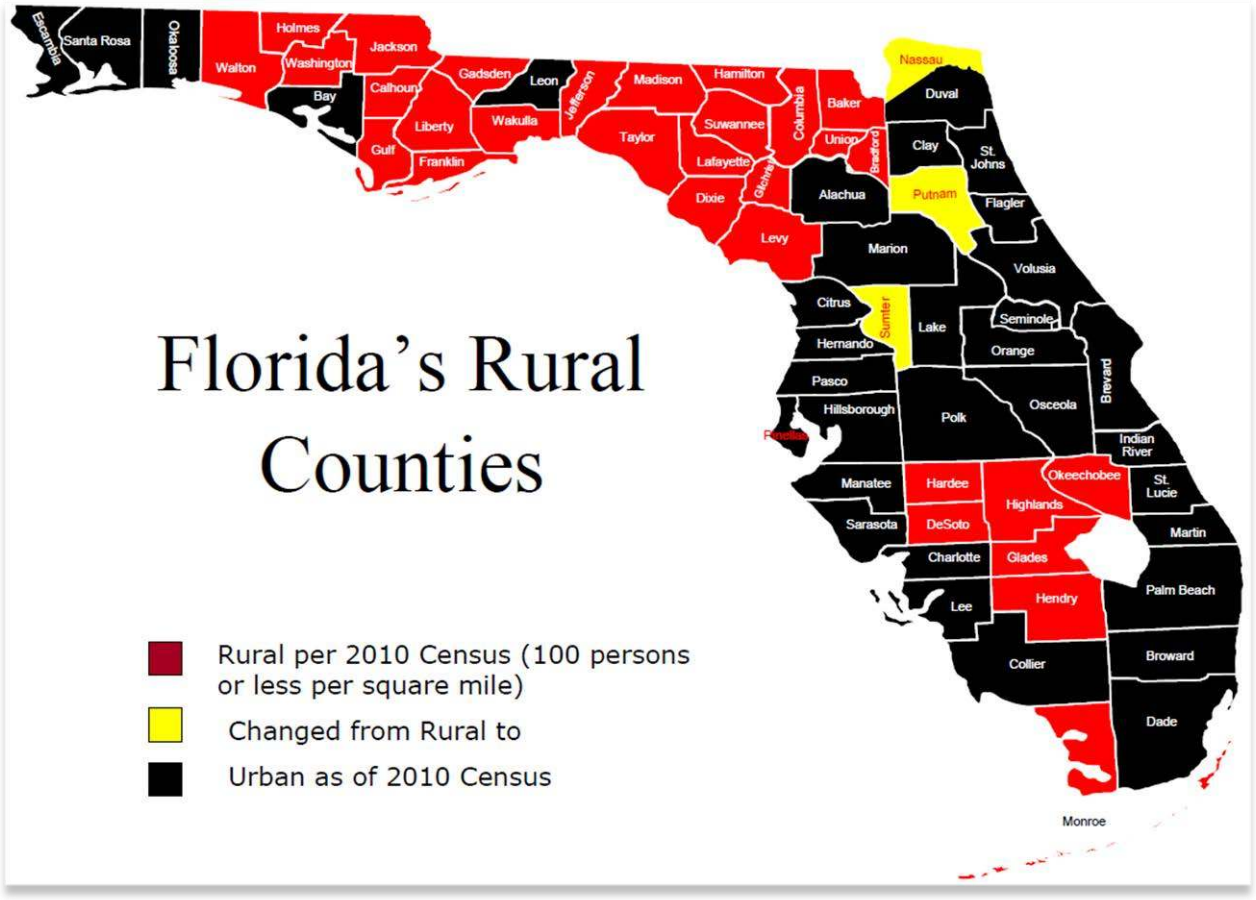
Rural versus Urban

Spatial differentiation is the extent to which an organization if distributed geographically (Maguire, 2003). Local police agencies have a distinct advantage over state and federal law enforcement agencies because their spatial differentiation is limited, and area of responsibility is

very compact. Most, if not all, law enforcement agencies assign patrol personnel to sectors, zones, or beats. A beat may be several blocks square or several square miles. However, state law enforcement agencies are unique in the respect personnel are given a county and city of assignment. In Florida, state law enforcement officers must reside within the county of assignment or with permission from the agency director, may live within 30-40 miles of the county of assignment. Officers may work their county of assignment or multiple counties adjacent to their county of assignment. Florida Administrative Code 60B-1.004 Motor Vehicle and Watercraft Use Policy dictate the use of a law enforcement vehicle and where the vehicle may be stored during non-use periods.

Florida statute 381.0406 defines rural as "Rural means an area with a population density of fewer than 100 individuals per square mile or an area defined by the most recent U.S. census as rural." Florida has 30 counties designed rural counties with the major of the counties being in the panhandle of Florida. The United States Census Bureau defines urban as having a population density of 1,000 individuals per square mile. The density of a county has a significant impact on the citizens and visitors to that county as it often determines what services will be provided and the level of service. This level of service is key to the delivery of law enforcement services and delivery of online distance-learning. Delivery of online distance-learning is dependent on cell phone carriers. Cell phone carriers provide levels of service based on demand. While cell phone carriers boast about the coverage, the coverage is generally for voice service. State law enforcement officers in Florida depend on cellular data from commercial carriers to provide data for their laptops and connectivity to the learning management system used for online distance learning.

Figure1



Courtesy of Florida Department of Health

Statement of Problem

Law enforcement agencies and law enforcement training centers have failed to utilize or embrace distance-learning technologies, or they have adopted distance-learning technology without knowing the effectiveness of the training or learning. The law enforcement profession has historically used traditional classroom lectures for education and hands-on demonstration for training. Students are provided instructional information; they are then required to demonstrate understanding through examinations or through practical applications with a designated trainer or instructor to ensure proficiency (Johnson, 2010). The current distance-learning used by law enforcement agencies and training centers involves a one-way transfer of information without the

oversight of an instructor or trainer. Law enforcement agencies and training centers should review the use of distance-learning technologies to determine which distance-learning programs and applications provide effective and efficient learning for their law enforcement personnel.

Theoretical Framework

There is evidence to support personal motivation and interest in the technology of the learner is the primary reason distance-learning is effective (Maguire, 2003).

The Significance of the Study

The primary purpose of this study is to determine the factors that influence the experiences, perception, and attitudes on the use of distance-learning technology for the delivery of education and training to law enforcement personnel for professional development training. The intent of conducting this research was to develop an enhanced understanding of law enforcement perceptions of online learning. The study will also attempt to determine which of the online learning platforms and technologies are preferred. This topic is essential considering law enforcement agencies are using distance-learning delivery systems and technologies without knowing if law enforcement personnel are effectively learning the required content and are capable of applying the knowledge gained during these distance-learning sessions.

The primary duties and responsibilities of law enforcement for the prevention of crime, criminal investigations along with the apprehension, and arrest of criminal have not changed over the last 50 years. What has changed is the technology used to fulfill the duties and responsibilities of law enforcement officers. One change for law enforcement and other industries is volume and the speed at which information is shared. Information and criminal intelligence is distributed quickly across a broad spectrum of public safety personnel and must be secured from dissemination to those who do not need to know. Distance-learning using online

resources is the standard for various occupations and professions. It is imperative that online sharing of information become the standard for the rapid and secure sharing of this information and the training and education of law enforcement personnel across the nation.

The secondary purpose of this study is to contribute to the overall knowledge regarding the use of distance-learning technology in the workplace for education and training. The information revealed during this research is applicable across a broad spectrum of industries and applications including training and education of public and private sector personnel.

In addition to determining the effectiveness and efficacy of using distance-learning technology for the delivery of professional development education and training to law enforcement personnel, does the use of online educational technology reduces the time required for students to review and comprehend training information. The use of online educational technology allows the learner to review quickly, delve deeply into areas of interest, and conveniently store resource information for future retrieval. This researcher's 38 years of experience as a law enforcement officer, including 28 years in various supervisory and leadership roles, discovered the most significant problem for law enforcement field personnel is the delivery of timely, relevant, and accurate information.

Working Definitions

The following are working definitions of the terms as used in this dissertation by the researcher.

3G: Is defined as the third generation of wireless technology (International Telecommunication Union).

4G: Is defined as the fourth generation of wireless technology. 4G technology can provide data connections that are up to 10 times faster than 3G connections (International Telecommunication Union).

Administrative: A section within the law enforcement agency charged with the responsibility for personnel recruitment, hiring, records management, and fiscal/budget operations (Gaines & Worrall, 2012).

Air Card: Is a type of wireless modem used in mobile devices to connect to cellular networks

CALEA: "Commission on Accreditation for Law Enforcement Agencies is an credentialing authority created by the joint effort of the International Association of Chiefs (IACP), National Organization of Black Law Enforcement Executives (NOBLE), National Sheriffs' Association (NSA), and Police Executive Research Forum (PERF), to improve the delivery of public safety services." (CALEA, 2010).

Criminal Justice Standards and Training Commission: Also known as CJSTC is part of FDLE to ensure that all citizen of Florida are served by criminal justice officers who are ethical, qualified, and well-trained. CJSTC establishes and maintains officer training programs, curricula requirements, and certification of training schools and training school instructors. They also review and administer appropriate administrative sanctions in instances when an officer, a training school instructor or a training school is found in violation of Florida Statutes and Commission standards (Florida Department of Law Enforcement, 2018).

Distance Learning: The use of the Internet to connect to an asynchronous learning management system for learning is a remote or non-classroom setting.

Florida Fish and Wildlife Commission: The Florida Constitution authorizes the Fish and Wildlife Commission. The Fish and Wildlife Commission has six divisions. For purposes of this study, all references to Florida Fish and Wildlife Commission (FWC) are referencing the Division of Law Enforcement.

Florida Highway Patrol: The Florida Highway Patrol is a division of the Department of Highway Safety and Motor Vehicles.

Internet: An electronic communications network that connects computer networks and organizational computer facilities around the world (Merriam-Webster, 2018).

Investigations: Is a broad term that defines law enforcement personnel who do not regularly engage in routine or preventive crime prevention patrols. Personnel assigned to investigations do not wear distinct uniforms or work rotating shifts. The primary function of personnel assigned to the Investigations Bureau is to follow-up and attempt to solve crimes and incidents reported by patrol units. Investigative personnel also investigate crimes that require extensive and on-going investigative time and technical resources. Typical investigative assignments are homicide, robbery, vice, narcotics, crimes against property, and criminal intelligence. The investigations unit may also contain the internal affairs unit responsible for investigating misconduct by members of the law enforcement agency (Maguire, 2003).

Learning Management System (LMS): ‘A web-based software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, eLearning programs, and training content” (CJSTC Florida Administrative Code 11B-35.0010).

LTE: Is defined as fourth-generation, long-term evolution. LTE is a type of 4G wireless service (International Telecommunication Union).

Patrol: Personnel who are generally in a distinctly marked police vehicle, wear a distinct uniform, respond to calls from citizens and engage in crime prevention patrols. Personnel assigned to patrol work rotating shifts with rotating days off and required to be available to respond to calls for service from the citizens they serve 24-hours a day, 7-days a week, 365-days a year, including holidays. The primary function of patrol officers is preventative patrol, documentation of crimes and incidents through offense incident reports and the arrest of suspects involved in crimes (Gaines & Worrall, 2012).

Professional Development: Professional development, which is also known as in-service training, as used in this research, is the continuing training and learning of state law enforcement officers with the Florida Fish and Wildlife Commission and the Florida Highway Patrol

Qualtrics: A simple to use, but powerful online survey tool to conduct survey research, analysis responses and other data collection activities (Qualtrics, 2018).

Ruggedized Laptop: A laptop constructed with heavy-duty, durable components designed to take extreme temperatures, extended battery life, wireless connectivity, specially designed to be used in vehicles and other extreme weather conditions (Dell Corporation, 2018).

Rural: Rural is defined as an area with a population density of fewer than 100 individuals per square mile (Florida statute 381.0406).

Support Services: A component of a law enforcement agency responsible for the management and storage of evidence and property, police communications, inspections section, auxiliary and reserve personnel, fleet management, and police communications (Maguire, 2003).

Traffic: Personnel whose primary duty is to monitor the flow of traffic, enforce traffic laws and investigate traffic crashes. Personnel assigned to traffic enforcement duties may be assigned to the patrol or support services depending on the agency (Iannone & Iannone, 2001).

Traffic includes vehicles, pedestrians, and boats. Traffic is considered a primary duty and responsibility for members of the Florida Highway Patrol and the Florida Fish and Wildlife Commission.

Urban: An area with a population density of more than 100 individuals per square mile.

CHAPTER 2

LITERATURE REVIEW

Introduction

Law enforcement education and training are frequently typecast as a rigid, military boot camp type training that must take place in a traditional brick and mortar classroom setting. Educational institutions are adopting different learning techniques and technologies to improve learning along increasing effectiveness and efficiencies. A review of the literature relevant to the use of distance-learning technologies is relevant and applicable for in-service or professional development education and training for law enforcement officers. A review of the literature provides insight into current practices within the field regarding research (Natriello, 2000). A literature review will clarify problems and answer questions that arise in researching a problem (Gall, Gall, & Borg, 1999). While there is substantial literature found that addresses the use of distance-learning technologies for education and other disciplines, there is little literature found that specifically addresses the use and application of distance-learning for in-service or professional development for law enforcement officers or use by law enforcement agencies. Donavant (2009a) stated, "The literature on the use of OE (online education) for police training is very primitive." There is literature on the use of distance-learning technology in other fields such as education, law, and the arts that is pertinent and relevant to this research. What makes law enforcement unique and challenging is the required professional development learning which is a combination of education and training that has to be delivered to a mobile environment. A second unique characteristic is the law enforcement officer may or may not have dedicated time to complete an entire lesson at one session, as officers may have to access the learning between calls for service. Whether law enforcement, nursing, education, or

engineering, students have full-time jobs with lives full of other activities and family responsibilities. Distance-learning programs offer the flexibility for students that would otherwise make learning opportunities impossible or burdensome.

Law Enforcement Training and Education

It is essential to survey the history of law enforcement to understand the training and education needs of contemporary law enforcement officers. Most police agencies in the United States are modeled after the "New Police" that was introduced in England by Sir Robert Peel around 1829. The New Police of England was based on the principle of discouraging crime by preventative patrol (Schmalleger, 1999). Technology has changed how law enforcement officers patrol to discourage crime through preventative patrol. Society has also added to the purpose, duty, and structure of the American police department that has necessitated additional training and education for law enforcement officers at the introductory level, specialized, and at the professional development level. In his article Historical Roots of Police Behavior: Chicago 1890-1925 that appeared in the Law & Society Review, Haller (1976) described police training during the late 1800s and early 1900s as:

> New policemen heard a brief speech from a high-ranking officer, received a hickory club, a whistle, and a key to the call box, and were sent out on the street to work with an experienced officer. Not only were the policemen untrained in law, but they operated within a criminal justice system that generally placed little emphasis upon legal procedure (p. 303).

Although the origins of modern police in America date back to the 1830s (Walker & Katz, 2002), mandatory minimum training for all law enforcement officers in the United States at the basic academy level, according to the International

Association of Directors of Law Enforcement Standards and Training, did not exist until 1981 (IADLEST, 2002). All states have established minimum standards for the basic training of new law enforcement officers that require attendance at an established police academy. These established police academies are traditional brick and mortar structures with many operating similar to military boot camps where students remain sequestered during their period of intense training. Students participate in traditional classroom instruction that covers topics such as death investigation, human trafficking, sexual harassment, telecommunications, and crisis intervention. The curriculum also incorporates problem-solving, officer safety and survival, traffic crash investigation, driving under the influence, anti-terrorism, interpersonal communications skills along with civil and criminal laws at the state and federal level (Florida Basic Recruit Curriculum, 2013). Students, known as recruits, must participate in physical fitness training that tests both their physical and mental endurance to physical muscle pain and stress. For example, recruits completing Florida's Basic Recruit Training Program at the Florida Highway Patrol Training Academy spend 28-weeks training in a military style-training program (Florida Highway Patrol, 2014). Recruits train and must demonstrate a high level of competence in the areas of defensive tactics, use of weapons, pursuit driving, special tactical operations, traffic stops, handcuffing and physical restraints, surveillance and advanced first responder training, and hazardous materials training (IADLEST, 2002; Florida Highway Patrol, 2014; Florida Department of Law Enforcement – Criminal Justice Standards and Training Commission, 2014).

Law enforcement education and training whether primary education and training, in-service or professional development have historically been taught in a traditional classroom setting in an instructor-led format. Once the recruit completes the law enforcement academy, the recruit returns to their respective agency and usually undergoes a type of training referred to as field-training (Thibault, Lynch, & McBride, 1995). The field-training is led by a dedicated Field Training Officer (FTO) who has received specialized training as a Field Training Officer and oversees all aspects of the hands-on training of the recruit. The FTO becomes the supervisor who guides and directs the recruit's actions during training. The field-training program was developed by the San Jose, California, Police Department in 1972 and consists of three four-week phases in which the officer receives orientation and problem-solving training that prepares the recruit to work alone (Thibault, Lynch, & McBride, 1995).

Academy and field training is supplemented by in-service training, which is also known as professional development training that usually continues throughout the career of the officer. This type of training is task-specific and prepares an officer for engaging in specialized assignments such as Special Weapons And Tactics (SWAT), cyber-crimes, traffic crash reconstruction, alcohol breath testing, or supervision and leadership. Career development training is used to develop personnel for specific career tracks such as crime against persons, a crime against property, an internal investigation that is also known as professional compliance, or homicide investigation (Wallace, Roberson, & Stechler, 1995). Officers may change job assignments several times during their career resulting in the need for additional in-service or professional development training. Examples of specialized professional development training courses offered in Florida include; Introduction to Supervision, Speed Measurement Devices, and Traffic Homicide Investigations. Examples of Mandatory Retraining courses according to

the Florida Department of Law Enforcement include; Human Diversity, Domestic Violence, Juvenile Sexual Offender Violations, Discriminatory Profiling, and Professional Traffic Stops, Use of Force training that requires physiological response dynamics and less-lethal force options, and Firearms Qualification. (Florida Department of Law Enforcement, 2013)

Thibault, Lynch, and McBride (1995) and Wallace, Roberson, and Stechler (1995) identify five types of law enforcement training; basic recruit received while at the training academy, field training, in-service, career development, and high liability. While all enforcement training is essential, the high liability training receives the most attention. Areas considered high liability include the use of force during civil unrest, making physical arrests, search and seizures, interrogations, and operation of police vehicles (Police Law Institute, 1998). The vast spectrum of knowledge that is required to be a successful and productive law enforcement officer in today's society requires a lifetime of expertise with a tremendous amount of learning at the beginning of an officer's career. The different types and frequency of training in which law enforcement officers engage suggest that most of an officer's career is devoted to receiving training that enables him or her to become a fully functioning officer. Perpetual training also requires the law enforcement officer and the law enforcement agency to devote a great deal of time and resources towards the proper training and maintenance of knowledge, skills, and abilities of law enforcement personnel (Johnson, 2007).

The rapid evolution of technology, public demands on law enforcement personnel, and even world events, such as the war on terrorism, have rapidly redefined the job of policing (Keetly, 2004). Police training professionals, the courts, and public administrators constantly review law enforcement training to identify the need for changes in subject matter and curriculum. However, one area that is seldom, if ever, reviewed is the delivery system for this

training. Historically, police training entails personnel at a site-specific location involved with face-to-face interaction, sometimes physically demonstrating a skill between the students and the instructor (Johnson, 2007). Research suggests that the use of distance-learning is an efficient and cost-effective alternative to traditional classroom delivery systems (Detweiler, 2004; Huang, 2002b; Kenner, Androwich, & Edwards, 2003). However, within the law enforcement training and professional development groups, there has yet to be a comprehensive study and assessment of law enforcement learner needs. The haphazard development of online or distance-learning courses to accommodate the financial needs of agencies and administrators contributes to the frustration of officers using distance-learning techniques and their gap in educational needs. (Donavant, 2009b).

Police officers are adults, and for any adult education, the training must be perceived by the adult student as legitimate and necessary to engage the adult learner (Donavant, 2009a). Organizational effectiveness can be maximized when the organization takes into consideration the learning needs of the students and develops training and education programs that minimize the disruption to their personal lives. The advancement of law enforcement techniques and the skills expected by the citizens require an officer who is a problem solver. Citizens expect law enforcement personnel to solve complex situations and problems expeditiously. This requires law enforcement officers to be highly educated in a vast array of topics. Law enforcement officers are expected to be professional in their actions and knowledgeable in so many areas of life that tenure is simply not a sufficient education (Donavant, 2009a). From an administrative perspective, the failure of police and other public administrators to address the growing demand for contemporary training and education of law enforcement personnel will result in a police society ill-prepared to address the growing demand for professional law enforcement services

from modern society. The failure to train and develop each generation of law enforcement officers will eventually lead to a collapse of the social justice system as we know it today (Donavant, 2009b).

History of Higher Education

Online distance-learning is relatively new in comparison to the traditional lecture learning methodology. However, distance-learning has been in existence since the early1890s with the inception of correspondence study. Correspondence education was created to solve the need for additional education in the area of agriculture during the Industrial Revolution. However, the agriculture lifestyle equated to rural locations, isolating students from traditional educational institutions. It was not until 1893 when Congress created Rural Free Delivery, also known as RFD, that rural farms received mail. Before the implementation of RFD by the United State Postal Service in 1902, rural families had to retrieve mail from a post office that was often many miles from the farm (Miller, Benke, Chaloux, Ragan, Schroeder, Smutz, & Swan, 2014). The Rural Free Delivery system provided the infrastructure to implement the distance-learning correspondence system.

The style and method used to deliver basic education and training to the United States military and law enforcement officers throughout the United States are rooted in the pedagogy style of Oxford and Cambridge. The leaders of our earliest colleges and universities such as Harvard, Yale, Columbia, Johns Hopkins, and Cornell felt the mixing of living and learning was the heart of higher education. The second common element that we see between today's military and law enforcement training and the early American colleges is the fusing of instruction with certification (Thelin, 2011). Another common feature of early higher education and law enforcement is the lack of a prerequisite to attend college to practice a learned profession. In the

early years of higher education, a college professor may have delivered a lecture on law that may have been combined with "such topics as 'police,' a field that was most likely a forerunner to what is known today as political science and public administration" (Thelin, 2011, p. 31).

Most early colleges were focused on a liberal arts education. In 1851, Massachusetts Institute of Technology and Cincinnati College of Agriculture were in the early planning and development stages to provide "useful education" to students. Early colleges in America and law enforcement today share the commonality of a lecture to the students with little or no discussion. However, early colleges provided the complementary learning concept of seminar where students and professor met to discuss current topics and understandings. This concept is completely void in basic law enforcement training today.

The limiting factors to attend college for most early Americans were affordability and access. In 1907, Brown University advertised a moderate student budget of $393 per year. The moderate budget covered tuition, incidental fees, room rent, board, along with books and labs. Translated into the year 2000 dollars this moderate $393 would translate to about $7,300 per year. Today, most Americans have physical access and financial resources that are available through grants and scholarships to those who have a desire to attend college (Thelin, 2011). The limiting factor for those who desire to become a law an enforcement officer in the United States is not financial but physical access. Those who want to become certified police officers in the United States must undergo a background check, which must be clear of any serious misdemeanor or felony arrests. The applicant must also be at least 19 years of age, have a valid driver license, and be able to meet strict physical abilities standards (Florida Department of Law Enforcement, 2013).

Between 1945 and 1970, tremendous changes were observed in higher education. Colleges and universities increased physical capacity and academic programs. The post-war economic boom also provided financial access to college for the growing "middle class." The catalysts for much of the academic change in higher education were the creation of public policies at state and federal levels strongly influenced by World War II. The single largest factor that influenced the accommodation and access for many was the GI Bill. The GI Bill attempted to solve the problem of how the government was going to shift from a wartime economy to a peacetime economy and provide jobs to the military veterans. The GI Bill provided up to 48 months of tuition plus subsistence allowance. Congress did not expect wide acceptance of the program with the government estimate projected at eight to ten percent. Government and education were taken by surprise when 16 percent of eligible veterans had entered college by 1950. Most interesting was the aspect that GI Bill students were not restricted to colleges and universities. They could carry their benefit payments to any educational institution that met the government requirements that included junior colleges, trade schools, and vocational schools, along with highly specialized programs such as law, architecture, and engineering (Thelin, 2011).

Distance-Learning

The concept of distance learning is not new. The Apostle Paul may be one of the first-documented distance educators with his letter to the Corinthians around 55 A.D. (1 Corinthians, New American Standard Bible). However, this modern form of learning is thought to have begun in 1858 by the University of London as correspondence education. Distance education made tremendous advancement in the 20th century with the advent of the Internet in the 1980s. If education is the conduit for facilitating the knowledge construction of individuals, then the

Internet is the wire within the conduit that provides the connection. Most countries have been unable to meet the educational demand for knowledge and learning exclusively through face-to-face or classroom type instruction (LaPointe & Linder-Vanberschot, 2012). The Internet and distance-learning have "greatly influenced developments in educational technology and has emerged as a credible strategy for making learning more efficient" (Daniel, Kanwar, & Uvalic-Trumbic, 2009). Technology has advanced tremendously along with the ideas and concepts of distance-learning. Accessibility, convenience, and availability is the trademark of distance-learning. Many people see the basics of accessibility, convenience, and availability as the primary reason for the inception and continued development of distance-learning (Wilson, 2012).

The telephone, television, video recording, and the Internet have all played a major role in distance-learning development with the Internet having the most significant influence (United Nations, 2000). In 2011, the United State Census Bureau reported 71.7 percent of households in the United States had Internet access as compared to 54.7 percent in 2003 (United State Census Bureau, 2013). This rapid expansion and full acceptance of the Internet allows individuals to obtain personal and professional development anywhere they can access the Internet, 24-hours a day, 365-days a year.

Online learning primarily began as an asynchronous activity that is not predetermined or occurring simultaneously. However, with the development of faster and faster Internet speeds and Web 2.0 technologies, synchronous training opportunities, those occurring at the same time, are rapidly becoming available for the typical student learning from a laptop or home computer. With the shift from asynchronous to synchronous learning, the differences between distance-learning and face-to-face traditional classroom setting begin to disappear. The advancement of social networks such as Facebook, LiveMocha, Student Circle Network, Google+, and Good

Reads are rapidly changing educational technology and moving it to a mobile platform (Kruger-Ross & Waters, 2013).

Most studies examining the quality of distance-learning programs are related toward student to student and student to instructor interaction and communication. Donavant (2009b) stated previous studies examining the effects of distance-learning had identified gender, race, age, and previous experience to distance-learning as determining factors in the satisfaction and potential success of student (as cited in Holley, 2002; Roach, 2002; Sakurai, 2002). Surveys of student satisfaction with distance-learning programs have revealed most students rated a program highly based on the gratification or lack thereof of the delivery system. This type of survey does not take into consideration the learning effectiveness of the program or class. The majority of research regarding distance-learning within the higher education community has been from a top-down approach, where the critical factor in examining the delivery method and effectiveness was from the perspective of faculty and administrators rather than the learners (Ortiz-Rodriguez *et al.*, 2005).

Education, specifically distance-learning, requires benchmarks to assure policy makers and taxpayer watchdog groups that funds allocated for distance-learning are not being wasted. Distance educators and educational institutions must ensure that funds are being properly spent and students are receiving measurable educational goals. Until recently, the primary method to determine educational success was to measure student learning. The measurement tool for K-12 has and probably will be for the near future is the standardized achievement test. However, a transformation is occurring where instructor performance is based primarily on students learning outcomes. This shift in K-12 will influence how other learning is measured, including distance-learning. Accreditation agencies have and will continue to look for evidence of learning in

distance education programs. The mere completion of a course will likely only be one measure of achievement. Performance measures such as independent testing and demonstration of knowledge, skills, and abilities will likely become the standard for distance-learning (Wilson, 2012).

A survey of seven municipal police agencies located in Oklahoma in 2005 provided insight into the intrinsic motivation related to professional education among career law enforcement officers. A total of 370 officers participated in the survey with an average length of service of 9.62 years with 89 percent of the officers surveyed having completed professional development training or education that was not required by their agency (Burns, 2005). The majority of officers felt professional development was important to them and the ability to perform their duties more effectively. Officers and administrators understand the need and desire for professional development training and education. Most are looking for a convenient, consistent, and cost-effective method for delivering the professional development training to officers with their different shifts. The development of mass media distance-learning programs began to appear in the 1980s to fill the need for efficient and effective distance-learning that would be available to all law enforcement personnel.

While television is considered a form of entertainment, it is also a form of distance learning. The Law Enforcement Television Network (LETN) began in 1989 and grew to an organization of over 2,000 sites training over 150,000 officers daily (Law Enforcement Television Network, 2002; Waggoner & Christenberry, 1997). Other agencies have either implemented distance education training or joined other agencies to form distance education consortiums. For example, some law enforcement agencies in southeastern Virginia have joined together to form the Mid-Atlantic Supervisory Institute that offers online police supervisory

training (Waggoner & Christenberry, 1997). The Internet has resulted in a shift in course development away from television, videotape, and CD-ROM technology (Zhand, 1998). Technology may be the most critical variable in course design. It is the distance education technology that allows learning opportunities to reach students who otherwise would not be able to attend classes or find it difficult to access these opportunities (Ravitz & Silver, 2004). Web-based courses have a distinct advantage over other types of distance education technologies in that they offer immediate access or links to an extensive collection of resources (Waschull, 2001). Course structure consists of the syllabus, study guides, course delivery format, and schedule. The syllabus is the most crucial structure instrument because it outlines defined goals and objectives, prerequisites, course assessment, scheduling, topics, and materials (Kearsley & Lynch, 1996). While the syllabus is the single most crucial portion of the course structure, some students require additional support to be successful at learning. The diversity of not only the students but the diversity of the location of the students dictates a rethinking of how distance-learning students must be supported (Garland & Grace, 1993; Newman & Peile, 2002). Any time and any place learning desired by the growing population of distance learners requires a variety of support systems referred to distance education support or DES. Distance education support is provided in one of six general support areas of face-to-face, telephone or email, regional learning centers, course materials, tutor-marked assignments, and learning management systems (Ng & Kong, 2012). While face-to-face sessions are possible with some institutions of higher learning, the growing diversity of the student population increasingly limits this option for DES. The next area is telephone and email support. The option of email provides the asynchronous aspect, but it limits the learner to a form of one-way communication. The second options of telephone support is a good option with the increased use of cellular and Voice-over-

IP telephone systems. However, this option introduces the problems associated with synchronous learning and the coordination of schedules. The third area is regional learning centers or RLCs. This arrangement may work well for a large university with remote campuses or for professional development where the corporate or regional office could provide remote learning centers in the satellite offices. However, without the satellite offices, the remote learning centers face the same problems associated with the face-to-face instruction, such as a physical distance between learners and support staff. The fourth support area is additional course materials; this is a cost-effective method but limits feedback from the learner. The fifth option for learning support is tutor-marked assignments. The tutor-marked assignments can best be described as frequent small assignments submitted to the instructor to ensure the learner is on track with learning, to include reading and understanding of the course material. These small assignments help the learner stay focused and engaged in the learning process through frequent feedback. The sixth and final area is the learning management system or LMS. Most college students in the United States are familiar with the LMS known as Blackboard. However, there are many learning management systems with marketing names known as Moodle, Canvas, Bridge, Skillsoft, Adobe Distance Education, and Cornerstone.

In 1997, the Federal Bureau of Investigation (FBI) conducted a pilot study in distance-learning techniques. They determined the quality of training was good and they saved millions of dollars by using a distance-learning format. To have more input into the online criminal justice curriculum, the FBI partnered with the University of Virginia (Zolkos, 1999). The United States Department of Justice (DOJ), in conjunction with the United States Navy along with the University of Central Florida, is now serving as a clearinghouse for information regarding onsite and online law enforcement training and providing this information online (National Institute of

Justice, n.d.). The Commission on Accreditation for Law Enforcement Agencies (CALEA), is the primary national accrediting organization for law enforcement agencies in the United States, Canada, and Mexico and has established standards for law enforcement training (Commission on Accreditation for Law Enforcement Agencies, 2013). The introduction to Chapter 33 of the CALEA Law Enforcement Standards Manual sums up the importance of training with the following statement:

> Training has often been cited as one of the most important responsibilities of any law enforcement agency. Training serves three broad purposes. First, well-trained officers are better prepared to act decisively and correctly in a broad spectrum of situations. Second, training results in greater productivity and effectiveness. Third, training fosters cooperation and unity of purpose. Moreover, agencies are now being held legally accountable for the actions of their personnel and for failing to provide initial and remedial training. CALEA Standard 33.1.1 requires the establishment of a training committee within the law enforcement agency, to assist in developing and evaluating training needs and serve as a focal point for input from those representing agency components and promote effective committee operation and to prevent misunderstandings (CALEA, 2013).

Most states have organizations that oversee law enforcement training. These organizations are referred to in most states as Police Officer Standards and Training (POST) or Police Standards. One of the primary purposes of POST organizations is to establish minimum criteria for the employment and training of law enforcement officers (IADLEST, 2003).

In Florida, law enforcement officers and corrections officers are regulated by the Criminal Justice Standards and Training Commission commonly referred to as CJSTC (Florida

State Statutes 943.10). The CJSTC requires that all instructors and classrooms meet prescribed standards and be approved by the Florida Department of Law Enforcement - Criminal Justice and Standards and Training Commission before using as a law enforcement training facility. (CJSTC Florida Administrative Code 11B-21.019)

Greenberg (1998) defines contemporary distance-learning as "a planned teaching/learning experience that uses a wide spectrum of technologies to reach learners at a distance and is designed to encourage learner interaction and certification of learning" (p. 36). Visser (2012) defines distance education as "as any set of purposefully devised procedures and resources to support people's learning in ways that focus on the learners' ability to choose when and where to engage in a particular instance of learning" (p. 24). While both definitions are accurate, Visser's definition encompasses the essence of learning required by law enforcement where she states "purposefully devised procedures and resources to support."

The CJSTC has established guidelines for the use of distance-learning for law enforcement personnel in Florida. Florida Administrative Code 11B-35.0010 eLearning Instruction establishes permitted uses of distance-learning for Florida law enforcement officers and agencies:

> (2) eLearning Instruction is defined as a broad set of applications and processes that are facilitated and supported by information and communications technology (ICT) that includes, but are not limited to, web-based learning, computer-based learning, virtual classrooms, digital media, internet learning, intranet learning, satellite broadcast, interactive TV, and CD-ROM.
>
> (3) Specialized Training Program Courses, Specialized Instructor Courses, and courses created from Specialized Goals and Objectives shall receive full credit for the

number of Officer Training Units (OTU) established for delivery of a course. “Officer Training Unit” is defined as “the number of seat hours determined to deliver a course through classroom instruction.”

(4) Training schools are permitted to expend Criminal Justice Standards and Training Trust Fund Officer Training Monies for conducting eLearning instruction for Commission-approved Specialized Training Program Courses, Specialized Instructor Courses, and courses created from Specialized Goals and Objectives, provided the courses are delivered using a learning management system and are instructor-led, and the courses meet minimum standards pursuant to paragraph (4)(b) of this rule section. Officer Training monies shall be expended pursuant to the requirements of Rule Chapter 11B-18, F.A.C.

(a) “Learning Management System (LMS) is defined as a web-based software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, eLearning programs, and training content. The LMS shall facilitate:

1. Management of users, roles, courses, and instructors.

2. Manager approval.

3. Student messaging and notifications.

4. Assembly and delivery of learning resources utilizing the Shareable Content Object Reference Model (SCORM).

5. Navigation of course sequence.

6. Collaborative learning (e.g., application sharing, discussion threads).

7. On-line assessment.

8. Display of scores and transcripts.

9. Grading of coursework and roster processing.

10. Collection and preservation of student activity and performance data.

11. Web-based or blended course delivery (web-based and classroom combined) accessible via internet enabled computing and/or mobile platforms.

(b) eLearning courses shall conform to the minimum standards and criteria established and documented on the eLearning Course Minimum Standards, Form CJSTC-18, Commission-approved December 16, 2010, (effective 3/2013). (CJSTC Florida Administrative Code 11B-35.0010)

Distance Learning for Law Enforcement

The one most likely reason given for the adoption of distance-learning is to remove the barrier of relocating to a physical location for learning. The demand for distance-learning is proliferating. In 2010, Allen and Seaman reported that 5.6 million students were enrolled in at least one distance-learning course in the fall of 2009. These students who were in college in 2009 and afterward are the future generation of law enforcement. These college students have learned using technology their entire educational lives. Traditional face-to-face learning is slowing shifting to distance-learning, even in the world of law enforcement. Historically, a seasoned, experienced police manager will be placed in the position of leading training and education for most criminal justice learning centers. Frequently, the training academy director will not have extensive specialized training and education in the area of adult education. The leader is frequently a subject matter expert because of the years of experience received on the job. However, a new generation of law enforcement educators is emerging that are transitioning from traditional classroom course development to distance-learning technology that includes

digital documents, email, blogs, web-conferencing, and podcasts (Amirault, 2012). Course content for all learning, not just law enforcement learning, is delivered using one or a combination of several approaches. Traditional, using no Internet technology to support the class. Electronic facilitated learning, where Internet technology is used such as the posting of class assignments. Blended or hybrid instruction where the students physically meet at a physical location at least once combined with distance-learning technology for the remaining instructional periods. Online or distance-learning, where all learning is exclusively online in a digital technology format. Frequently traditional core courses are transitioned from traditional classroom formats to online versions without consideration for the technology used to deliver the course material. The direct course conversions from the traditional classroom to distance-learning frequently use the same course schema for no other reason other than not wanting to address curriculum issues from accrediting organizations (Amirault, 2012). When designing a law enforcement training program for a distance-learning format, it is important to determine if there are initial limiting factors beyond the technology and the desired training outcomes that must be considered.

There are some unique aspects of distance-learning instruction. The most distinctive aspect is that students and teacher do not get to see one another. While this aspect is not an insurmountable problem, the simple feedback techniques learned by any first-year teacher such as the blank look or students rolling their eyes is not available to the instructor. Primary learning is dependent on written correspondence, which is perceived as a one-way form of communication (Clark & Berge, 2012). One factor that must be considered is that the course content or method of presentation has to comply with appropriate national or state accreditation standards (Indian Higher Education Telecommunications System, 2006, North Carolina

Department of Public Instruction, 2006, Florida Criminal Justice and Standards and Training Commission, 2013). However, the technology may be the most important variable in course design. It is also the limits of distance-learning technology that dictates course design to facilitate an effective learning environment (Clark, 2001). Proportionate to technology selection, identifying the goals and objectives of a training program is dominant. Goals and objectives that address a specific issue are the underpinnings upon which course content is developed (Willis, 1993). It is also understood there is a clear difference between training and education. Where training is accepted as the development of skill and education is the development of knowledge, some training is not suitable for a distance-learning format for law enforcement officers. Another factor may be the legal requirements that determine how a course is designed and delivered. For example, the State of Florida Criminal Justice and Standards Training Commission and Florida State Statutes 316.1906 requires officers authorized to issue traffic infractions for unlawful speed based on speed detection equipment such as RADAR (Radio Detection and Ranging), LIDAR (Light Detection and Ranging), or LASER (Light Amplification by Stimulated Amplification of Radiation) equipment, must receive a minimum of 40-hours of training with 12-hours of hands-on use in the field with a certified instructor (CJSTC, 1992).

Training requirements arise from a variety of sources, such as changes in laws, statutory rules, court rulings, emerging social problems, policy or leadership changes or more frequently the introduction of new technologies. Failure to develop or improve training programs with clear goals and objectives that relate to the problem or issue often results in significant issues for law enforcement agencies at a future date (Thibault, Lynch & McBride, 1995).

While online or distance-learning is a new concept to an older generation, "the most recent report on online learning from the Sloan Consortium indicates that online education is continuing to grow and is central to many institutions' long-term strategic goals" (Allen & Seaman, 2010). With this growth comes change not only for the students but also for the instructors. It is reasonable to assume that instructional personnel who are transitioning from traditional classroom instruction will have a much different teaching style than those who initially jumped at the opportunity to teach online. Administrators and staff involved with the development of distance-learning programs will need to understand the differences between the two different types of instruction and must consider how they can best accommodate their needs (Johnson, 2007), and this is especially important in the world of law enforcement education where few instructors have adopted distance-learning. Course delivery presentation strongly depends upon student learning style but also depends on the abilities of the instructors to deliver the information. Law enforcement agencies employ adult learners. As adult learners, their age, educational level, and expectations differ significantly from younger traditional students (McGivney, 2004). The development of online courses can follow one of two approaches; a traditional approach where the individual instructor develops the course or through a more collaborative approach. Hawkes and Coldeway (2003) argue that a collaborative approach can be more effective. "Because the faculty-driven approach is the one-stop help center for content, assessment, technical, and procedural questions, it may in some cases be preferred" (p.435). This approach is especially important to the law enforcement educator who is generally a subject matter expert in criminal justice but generally has little or no experience as an educational technologist who combines technology with educational content. However, having technical skills is far from the most critical requirement for developing an online course. Many authors

argue that the distance-learning format promotes a more interactive learning process where students take on a more facilitative role (Jolliffee, Ritter & Stevens, 2001; Palloff & Pratt, 1999, 2001; Shearer, 2003).

Educational Technology

The instructional or educational technologist is a specialist who is educated and trained in the integration of technology to facilitate learning. Educational technologists are an outgrowth or maturation of audio-visual specialists that were developed in the fifties (Luppicini, 2005). In 1977, the Association for Educational Communications and Technology (AECT) defined educational technology as a "complex and integrated process, involving people, procedures, ideas, devices, and organization for analyzing problems and devising, implementing, evaluating, and managing solutions to those problems, involved in all aspects of human learning". By 1994 AECT transitioned from educational technology to instructional technology and designated instructional technology as the "theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning" (Luppicini, 2005, p. 105). Whatever definition is chosen, the person who utilizes tools such as video, along with techniques such as interactive web browsers, coupled with educational theories and methods to enhance student learning through technology is an educational or instructional technologist and a key component to the development and implementation of any distance-learning program.

When learning something new, students often require additional support or instruction, this is true in the traditional classroom, blended, and exclusive online learning programs.

Online Learning for Professional Development

One of the key factors to any learning is the professional development of the teachers, but this is especially important for the online environment. Professional development is critical in

assisting teachers to adopt and adapt superior online pedagogical practices to transition from the classroom to online teaching (Baran & Correia, 2014). To facilitate professional development for any profession through online learning, it is critical that faculty members responsible for online professional development be thoroughly comfortable with current online teaching and learning practices. A high level of competence is required for online teaching; it is essential for faculty members who teach online courses understand the time and effort required to develop and implement a successful online course. "Support and professional development programs, therefore, are critical for helping faculty engage in pedagogical problem solving and discovery about online teaching" within their respective disciplines (Baran & Correia, 2014; Kreber & Kamuka, 2006). Previous research into online teaching revealed highly successful instructors had great knowledge about the subject but required assistance in designing and structuring the course material. The teachers knew their students but needed assistance in guiding students learning and maintaining a strong teacher presence in online classes (Baran & Correir, 2014). Teachers of any subject, but especially professional development learning, must have technical support, pedagogical support, and design support. While a teacher may be superior in subject matter, they need additional technology support when trying to decide which technology platforms to use when developing an online course. It is essential to have an accessible support person who can troubleshoot technological problems. It is also essential to have a technology person available who is knowledgeable of the technology solutions to facilitate a particular learning task. Design support is also crucial as the subject matter expert teaching may have used technology successfully in the classroom for many years, but that solution may not be suitable for an online format. To gain efficiency and effectiveness in developing online courses many institutions of higher learning conduct workshops to highlight the various technological tools,

features, and platforms available to an instructor. (Baran & Corrier, 2014; Taylor & McQuiggan, 2008).

Methods of Delivery

There are three current options for delivery of professional development learning; instructor-led face-to-face in a classroom, distance-learning, and a hybrid or blended option of combining face-to-face classroom led with distance-learning. The Online Learning Consortium formerly known as SLOAN is an organization of learning professionals dedicated to online learning. They define blended or hybrid learning where 30% - 70% of the instruction is delivered online. They also define online learning as a course with no face-to-face meetings and most if not all of the course material is delivered online.

The method of delivery of distance-learning has grown exponentially with the inception of the Internet. Video Home Systems are known as VHS become popular and affordable in the early 1970s. The relatively low cost of the player's system and easy recording, transporting, and playing of the VHS tapes introduced a shift in distance-learning.

Television was invented in the 1930s but did not become popular until the 1950s. The initial use of television for education was through a closed circuit system where a single instructor, generally considered an expert in the field of study, provided instruction to many classrooms. Classroom teachers only had to make sure the broadcast was working and keeping order in the classroom. Later, television was used as an educational tool in the classroom through the use of broadcast television for historical events such as John F. Kennedy's funeral and the landing of men on the moon. In the 1970s, community colleges teamed with local public broadcast stations (PBS) to play pre-recorded lessons at specific times for students to watch. Lessons were often repeated in the morning and evening to accommodate varied schedules.

The use of Video Home System or more commonly known as VHS tapes was the next progression in distance-learning. Classes or instruction was recorded on a VHS tape, then placed in the library where students could view them or check them out where they could be reviewed at home.

Today, the use of mail correspondence, television, or VHS tapes for distance-learning seems archaic. Most distance-learning completed today involves the use of technologies such as streaming video, video conferencing, Microsoft Sharepoint collaboration software, learning management systems such as Blackboard that has integrated tools built into the application to facilitate learning through the many and varied digital technologies.

One single question that is asked during the discussion of distance-learning is the quality of learning with distance-learning compared to blended or traditional face-to-face classroom instruction. In 2009, Means, Toyama, Murphy, Bakia, & Jones conducted a meta-analysis study that compared traditional classroom to blended and online learning. Mears et al. found that students who took all or most of their class online performed slightly better, on average than those taking the equivalent course through traditional face-to-face instruction. They also discovered blended learning had a greater advantage over face-to-face instruction than did exclusive online instruction" (Means et al. 2009).

Improving Police Training

Many since the 1960s have voiced the need and desire for a higher standard of education for police officers across the nation. The basic premise behind the desire for the higher level of education and training would result in improved police services, professionalism, ethics, knowledge, skill, and abilities as cited by Birzer (2004), Burns (2005), Deakin (1988), Della (2004), and Pope (2003) (Donavant, 2009). The basic police recruit training program has

changed significantly since on-the-job training in the early 1900's. Modern police academies use formal lesson plans developed by curriculum development professionals. Highly trained professional trainers and educators conduct education and training for basic and professional development classes. A very structured Field Training Officer (FTO) program thoroughly documents every aspect of the field training process using a detailed checklist of events and incidents a recruit must experience before working independently. The ever-changing role of law enforcement has progressed from the typical response of completing an incident report or effecting an arrest to analytical strategic problem-solving. Basic recruit and field training is insufficient for the social challenges faced by police agencies today. Law enforcement leaders are abundantly aware of the need for the evolution in training requirements to address the changes in society. A lack of response to the dynamic training needs required for the complex police operations encountered today will result in mediocre police personnel performance as witnessed throughout the United States in the form of demonstrations, public outcry, and riots (Donavant, 2009a). Unusual demands for police services often place restrictions on potential learners. It is not always possible to attend traditional classroom training when coupled with the demands of rotating shifts and days off. However, in some areas of the country, the use of Internet-based distance-learning training has been introduced in addition to traditional brick and mortar classroom training. "Computer-based simulation training has also become a standard way of training officers to perform effectively in different situations, including use-of-force encounters" (Bennell *et al*., 2007) in many areas of the country. "Although some scholars have called for theory-informed police training initiatives (Birzer, 2003; McCoy, 2006; Vodde, 2012; Willis, 2010), what is currently absent in the police training literature are concrete empirically

supported instructional strategies that can be incorporated into training to promote the long-term retention and transfer of learned skills and knowledge" (Mugford, *et al*., 2013).

Mugford, Corey & Bennell (2007) make a good argument for the use of the Cognitive Load Theory (CLT) for training and education of basic recruit personnel in addition to professional development training. Cogitative Load Theory (CLT) goes to the heart of distance-learning, as one of the tenants of CLT is the design and delivery of instructional materials. CLT draws together two systems of human memory, working memory, and long-term memory. "The central focus of CLT is on the instructional design consequences of the limited ability of the working memory to process information, coupled with the virtually unlimited capacity of the long-term memory to store learned information" (Kirschner, 2002; Paas et al., 2003; Sweller, 1998). Working memory is like the Random-Access Memory (RAM) of a computer system, where the information is entered and processed temporarily, then later moved to the hard drive for long-term storage. Working memory can only process two to four elements concurrently. Long-term memory (LTM) is where information is stored in the brain when it is not consciously being accessed by our working memory (Mugford *et al.,* 2013). Schemas are learning patterns or structures developed in the brain. "Changes to an individual's LTM result from the construction of cognitive schemas, which assemble incoming information into understandable chunks of information that hold the same underlying purpose to the learner" (Paas *et al.,* 2003). The development of a schema allows an officer to transfer knowledge developed in one area of police work to another area. For instance, an officer may encounter a person who intends to commit "suicide by cop" but has never encountered a suicide by cop suspect before. However, the law enforcement officer has generalized knowledge about suicide and armed suspect schema, which may generate an appropriate response. Schemas are developed through repetition; for instance, a

recruiting officer is required to draw their weapon from their holster hundreds of times before the first shot is ever fired from the weapon. This schema development becomes so automated that it is performed with little conscious effort. The steps have moved from the working memory to the long-term memory. The second phase of the training adds the element of live ammunition, acquiring proper target alignment and squeezing the trigger with a consistent force to produce an accurate shot. This process is repeated hundreds of times to develop a second schema supported by the first schema used to draw the weapon from the holster. Law enforcement officers are also trained to react to a perceived threat of violence, also a learned schema. Post-shooting interviews with law enforcement officers involved in shooting reveal the officer seldom remembers drawing their weapon from their holster or firing a shot.

Cognitive load is the mental effort required by the learner to learn to perform a task or series of tasks. In the previous example, the development of a schema by an officer to react to the perceived threat of deadly force. The purpose of using the CLT for law enforcement training is to develop a schema acquisition and automated response to a variety of incidents that an officer may encounter throughout their career (Kischner, 2002; Sweller *et al.,* 1998). While CLT is a good choice for basic recruit training, but the benefits are enhanced at the professional development level. As an officer gains additional training and experience during the duration of a career an incident that began as intense, multiple schema events with a high cognitive load become a single event; we typically acknowledge the collapse of these multiple high cognitive load events into a no-load event as experience (Sweller, 2006).

For this reason, distance-learning for recruits or those officers with less experience must be designed and delivered differently to take into account the changing degrees of schema development. Instructional designers must account for the experience of the learner when

designing online training. Failure to address the learner's experience may result in expertise reversal. Expertise reversal results when methods and designs that work well for inexperienced learners are used "to train learners who have already acquired a certain level of mastery in the area of instruction, learning may not take place and can even be impeded" (Kalyuga *et al.,* 2003: Paas *et al.,* 2003).

Another opportunity to improve online training and education for law enforcement is the use of design-based research. Design-based research is the combining of empirical research with theory design within learning environments. The concept is the constant review of innovative designs through an iterative process of design, development, implementation, and analysis (Wang & Hannafin, 2005). The design-based research is composed of two primary parts, Quality Matters, and Community of Inquiry. The Quality Matters aspect is based on the review of experienced faculty members using a rubric centered on quality. The rubric is centered around eight categories, "course overview, learner objectives, assessment and measurement, resources and materials, learner engagement, course technology, learner engagement, course technology, learner support, and accessibility" (Swan *et al.,* 2012). These eight categories are then broken down into 40 different standards with each standard rated on a scale of 1 to 3. A course must then meet a minimum score to be considered acceptable. While the Quality Matters framework evaluates the course design, the second part of the process is the Community of Inquiry, which addresses the learning processes. The Community of Inquiry presumes three presences, which is a social presence, cognitive presence, and teaching is each represented to create learning.

Technology

The backbone or framework for any online distance-learning is the technology that facilitates and supports the programs and applications. In 1965, Gordon Moore, one of the founders of Intel, the microchip maker, predicted the density and capability of the microchip would double every two years, thus doubling the capabilities of computers every two years. This technological doubling every two years has significantly affected our economy and our society.

The drastic reduction in the cost of a computer has influenced every aspect of our lives, including education. In 2013, the United States Census Bureau estimated that nearly 84% of all households in the United States had at least one computer and 74.4% of those computers were connected to the Internet (U.S. Census Bureau, 2013). Think about where we were 20-years ago with online learning, think about where we are today, then try to think where we are going to be in 10-years. In 2005, the following jobs did not exist; App Developer, Market Research Data Miner, Social Media Manager, or Cloud Computing Services. It is difficult to discuss the technology behind online learning for the mere fact many of the applications, software, and computer systems that exist today to support online learning will be at their end of life before this research can be published. However, to look into the future, we must remember the past, including our mistakes and analyze the present to visualize the future. Microsoft co-founder Bill Gates stated in a May 2013 interview with Anya Kamenetz with Fast Company magazine,

> …if you're not training your workforce, you certainly don't have the most vibrant economy, and you won't be able to afford a military that's stronger than all other countries' put together. In the long run, your human capital is your main base of competition. Your leading indicator of where you're going to be 20 years from now is how well you're doing in your education system.

One of the most important components of distance-learning is the presentation of the learning material. Key behind the presentation is the instructional technology which is defined by the Association for Educational Communications and Technology also known as AECT defined "instructional technology" in 1994 as the "theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning (AECT, 1994).

One significant aspect of distance-learning is the ever-changing platform of technology. Students have moved from large desktop computers to laptops, to even smaller platforms such as tablets and smartphones. This growth of laptops and smartphones has resulted in an untethering of students from wired devices and into the world of wireless devices. This evolution from wired computers to wireless mobile devices has created the need for mobile learning applications. These mobile learning applications must use data efficiently and effectively to allow mobile devices to work quickly with the minimum use of data. Learners desire the ability to stay connected with their mobile learning devices. The days of restricting learning to a fixed location such as an institution of higher learning or library are rapidly diminishing. Producers of learning materials must produce learning platforms that adopt many different types of browsers and operating platforms to be efficient and effective in a mobile learning environment.

Summary

This review of the literature provided an outline to support the academic argument and the theoretical statements made as part of this study. This chapter reviewed the history of higher education and distance learning for the last 100 years, but more precisely the education and training of law enforcement personnel. Educational technology has changed how people learn and has enhanced the opportunities to use online learning for professional development education and training. The methods used to deliver education and training have improved

tremendously in recent years which is also providing an opportunity to improve police training and education through the use of technology for distance learning.

CHAPTER 3

METHODOLOGY

Introduction

This chapter describes the methodology and research that was used to measure the preference of learning styles for professional development learning for sworn law enforcement members of the Florida Fish and Wildlife Commission and the Florida Highway Patrol. The research looks at distance-learning technology for the delivery of education and training to law enforcement personnel for professional development from the student's perspective. The purpose of this quantitative study was to analyze the factors that influence the experiences, perceptions, and attitudes of certified law enforcement personnel employed by the Florida Highway Patrol (FHP) and the Florida Fish and Wildlife Conservation Commission (FWCC) toward the use of online learning for professional development. This study was specifically designed to address the training issues of state law enforcement agencies who have personnel dispersed across 66,000 square miles of land and coastal waters of Florida. Local law enforcement agencies do not have the problems associated with the geographical distribution of personnel that is shared by state law enforcement agencies. The purpose of this chapter is to provide a framework and convincing justification for using a quantitative approach for data collection and findings. This chapter reiterates the purpose of the study, offers a description of the research design, outlines the study sample and sampling procedures, provides information about the data collection instrument, along with describing how data were collected and analyzed. The study is limited to sworn law enforcement officers employed by the state of Florida who has statewide law enforcement jurisdiction. Sworn law enforcement personnel assigned to the Florida Highway Patrol and Florida Fish and Wildlife Conservation Commission

do not report to a fixed location for a pre or post-shift briefing, they instead rely on wireless connectivity to access most intelligence and law enforcement information. The purpose of this quantitative study was to examine and analyze the factors, influences, and perceptions of certified law enforcement personnel employed by the state of Florida in the use of online distance-learning as a method of delivering professional development training and education. The use of current sworn law enforcement personnel for the Florida Highway Patrol and Florida Fish and Wildlife Conservation Commission was the appropriate target population for this research as they represent the two largest state law enforcement agencies in Florida. Officers and troopers are assigned ruggedized laptop computers with commercial air cards for connectivity. Officers employed by other Florida state law enforcement agencies, such as the Florida Department of Law Enforcement or the Department of Business and Professional Regulation – Division of Alcoholic Beverages and Tobacco are assigned to offices with wired computer connections.

Florida state law enforcement has limited their adoption of online distance-learning for professional development to subjects that have been previously presented in a traditional classroom setting or subjects related to policies and procedures. Law enforcement officers are expected to be professional in their actions and knowledgeable in so many areas of life that tenure is not sufficient training and education (Donavant, 2007). A study published in 2013 in the *International Journal of Emergency Mental Health* (Violanti, Hatrley, Gu, Fekedulegn, Andrew, & Burchfiel, 2013) revealed that police officers have a reduced life expectancy of 21.9 years in comparison to the general white male population. The life expectancy of a white male law enforcement officer is 57.8 years compared to the non-law enforcement white male life expectancy of 79.7 years of age. This reduced lifespan translates to earlier retirement ages due to

contributing health-related issues such as posttraumatic stress, exposure to unhealthy environmental factors combines with shift work and unhealthy eating habits along with deaths occurring while in the performance of their duties. Many officers retire after 20 years of service resulting in the average length of service for a police officer in the United States in 2007 was 26.4 years (National Criminal Justice Reference Service). It is the early retirement age of law enforcement officers that precipitates the lack of historical knowledge that necessitates the importance of continuous professional development training and education for law enforcement officers in the United States.

Donavant (2009) stated, "The literature on the use of OE (online education) for police training is very primitive" (p. 226). A review of the literature has revealed limited research has been completed on the use of online distance-learning for law enforcement education and training for professional development. This study seeks to address this gap in the literature and at the same time provide practical knowledge and guidance to those law enforcement agencies considering the use of online distance-learning for their officers.

Previous studies on the use of distance learning related to higher education revealed that gender, race, age, and previous experience with distance learning was directly related to success and satisfaction with distance learning (Roach, 2002; Sakurai, 2002). Chan & Auster, (2003) also identified a relationship between job experience and level of education that corresponded with distance learning effectiveness.

Research Question and Hypotheses

The primary research question that is being addressed is what are the factors that influence the experiences, perception, and attitudes of Florida state law enforcement personnel? To answer this research question, the following five sub-questions must be addressed:

1. Does connectivity influence the officer's perception of online distance learning for the professional development of state law enforcement officers?
2. Does online, traditional classroom, or blended learning influence the officer's perception of online distance-learning for professional development of state law enforcement officers?
3. Does age, race or national origin, sex, or years of experience influence the officer's perception of online distance-learning for professional development?
4. Does the level of education and training influence the officer's perception of online distance learning for professional development?
5. Does duty assignment influence the officer's perception of online distance learning for professional development?

Research Design

Based on the review of the literature, five hypotheses directed the analysis of the data. The research questions were addressed through an online survey of all state law enforcement officers employed by the Florida Highway Patrol (FHP), and the Florida Fish and Wildlife Conservation Commission (FWCC).

The study is correlational study, grounded in the quantitative paradigm, suitable for testing objective theories about relationships among variables. Ayiro (2012) defines a correlational study as the statistical techniques to examine the possible relationships between two or more variables, without generalizing about the casual nature of the relationships. Glaser and Strauss (as cited in Johnson & Christensen, 1989) identify four elements of grounded theory. Primarily, the data and the theory must be congruent. Does the theory correspond to the real-world data and not to the desires of the researcher? The second element requires the theory

make sense to both the researcher and others who work in the field being researched. The third element is a generality. Does the theory apply to multiple situations or does it only apply to specific situations? The final element is control. If another researcher uses the theory, would they have the same control of the phenomenon that is explained by the theory?

Researcher Experience and Bias

It is incumbent upon any researcher to reveal bias issues when conducting a study. Creswell and Miller (2000) included researcher bias as one of the eight verification procedures. My interest in this topic and subsequent research stems from my background and more than 38 years of experience as a state law enforcement officer in the state of Florida. During this time, I have been involved in the execution of law enforcement duties and responsibilities, along with the instruction of law enforcement personnel at both the basic recruit level and professional development, which is also known as in-service training. The professional development is generally the enhancement of known skills and education to improve the officer's ability to deal with a variety of experiences encountered during regular work duties. I have been in supervision for more than 28 years and have observed and experienced both high-quality and poor training throughout my years of service. My experience in leadership positions has shown me the importance of consistent, high-quality training and education for professional development.

There are approximately 650 state and local law enforcement training academies in the United States that offer basic training to new law enforcement personnel. Once a law enforcement officer is hired, the responsibility for continuing professional development training is the responsibility of the employing police agency (Bureau of Justice Statistics, n.d.). The lack of professional development training is well noted through the lack of trust by many of the people served by the officers and the continuing lawsuits against the agencies and officers for

poor performance. The lack of high-quality training and education for all law enforcement personnel across the United States can have deadly consequences.

Design Bias

It is recognized there are two design bias in this research design. First, not collecting the law enforcement agency for which the respondent was employed limited the researcher's ability to compare the influence of the two different learning management systems and their impact on the experiences, perceptions, and attitudes of the users. The second design is the self-reporting of the participants. Participants reported their self-views in many of the questions. Mullane & Williams (2013), acknowledge self-reporting data is skewed toward the norms of society for a variety of reasons, including ignorance and social norms.

Institutional Review Board

The details of the study and request for approval were submitted to the University of North Florida's Institutional Review Board (IRB) on November 21, 2017. Additional information or clarification was requested from the IRB on February 8, 2018. A revised approval request was submitted on March 19, 2018, to include letters of support from the Florida Highway Patrol (Appendix D), and the Florida Fish and Wildlife Commission (Appendix E). Declaration of Exempt Status for IRB#1152026-2 was sent by the IRB to the researcher on April 10, 2018, with a request to provide an Exempt Status Report by April 10, 2021.

Survey Population

This cross-sectional one-time web-based survey was conducted to determine the experiences, perceptions, and attitudes of certified law enforcement personnel employed by the Florida Highway Patrol (FHP) and the Florida Fish and Wildlife Conservation Commission (FWCC) toward the use of online learning for professional development. All participants are

state law enforcement officers with statewide jurisdiction, often responsible for providing law enforcement services covering multiple counties. A multi-question survey was sent to all certified law enforcement personnel employed by the Florida Highway Patrol (FHP) and the Florida Fish and Wildlife Conservation Commission (FWCC). The use of electronic surveys through Qualtrics Internet-based software program allowed the researcher to collect large amounts of anonymously collected data in a relatively short period across a large geographic area. The Florida Highway Patrol employs approximately 1,950 certified law enforcement personnel, including personnel dedicated to the enforcement of federal and state commercial vehicle laws and regulations. The Florida Fish and Wildlife Conservation Commission has approximately 800 officers throughout the state of Florida. The 2,750 officers employed by these two agencies represent 67% of the total state law enforcement officers in Florida.

A pilot survey instrument was sent to nine recently retired personnel from both agencies from across the state of Florida. These test individuals, who were not part of the study, tested the survey instrument to provide feedback to ensure questions were understandable, URL links were operational, and the survey provided the appropriate responses to the questions asked. The pilot survey validated the questions, responses, URL links, and operation of the Qualtrics software. The pilot also provided an average time to complete the survey which was provided to the study participants.

Research Survey Questions

The focus of this study was to determine the experiences, preferences, perceptions, and attitudes of state law enforcement officers regarding in-service or professional development training delivery methods. Careful consideration was given to the survey question wording, format, and content to ensure reliability. Survey questions were derived from previously

validated surveys. The primary survey instrument used was The Test of Online Learning Success (TOOLS), created by Kerr, Rynearson & Kerr, in May 2003. Additional questions were taken from research completed by Brian Donavant on the Efficacy of Distance-learning for Professional Development of Police Officers in 1989. The final group of questions was taken from Technology Uses and Perceptions Survey also known as TUPS that is part of ongoing research conducted by the College of Education at the University of South Florida.

The term Professional Development and In-Service training and education were used interchangeably for this survey.

Questions 1 through 5 on the survey instrument have to do with the specific online distance-learning program used by the law enforcement agency. The questions serve to measure the response of the participant to determine if a specific learning management system influences their experiences, perceptions, and attitudes on online learning.

Questions 6 through 43 on the survey were designed to capture their traits and attitudes toward learning and their capabilities, along with the respondent's learning preferences. These questions serve to measure the response of the participant to determine if knowledge, skills, and abilities influence their experiences, perceptions, and attitudes on online learning.

Questions 44 through 49 address their knowledge and experience with the most common software, Internet browsers, and computer operating systems. These questions will serve to measure the response of the participant to determine if software, Internet browsers, or operating systems influence their experiences, perceptions, and attitudes on online learning. For each type of software, operating system, and web browser the respondent was asked to indicate their level of skill with the technology, with 0 being no experience, five being average and 10 being an expert.

Questions 50 through 53 addresses how participants gain knowledge about the world around them and their use of technology. These questions serve to measure the response of the participant to determine if situational awareness of the world events and if the media influences their experiences, perceptions, and attitudes on online learning along with their use of technology.

Question 54 and 55 address what they do with their leisure time. These questions serve to measure the response of the participant to determine if leisure time activities influence their experiences, perceptions, and attitudes on online learning.

Question 56 is a demographics question related to age. The question asks the respondent to categorize themselves into one of the following age groups, 18-27, 28-37, 38-47, 48-57, 58-67, and 68 plus years of age. The question was used to measure the response of the participant to determine if age influences their experiences, perceptions, and attitudes on online learning.

Question 57 measured race by asking the respondent to categorize themselves into the category of one of the following; White or Anglo-American, Black or African-American, Native American or Asian, Hispanic, or Other. The question is used to measure the response of the participant to determine if race or national origin influences their experiences, perceptions, and attitudes on online learning.

Question 58 asked the respondent to indicate the number of years of full-time law enforcement experience and used to measure the response of the participant to determine if years of experience in law enforcement influence their experiences, perceptions, and attitudes on online learning.

Question 59 asks the respondent “Are you a certificated Criminal Justice Standards Training Commission Instructor? The question is used to measure the response of the participant

to determine if certification as Criminal Justice Standards and Training Commission instructor influences their experiences, perceptions, and attitudes on online learning.

Question 60 asks the respondent to categorize themselves into the category of one of the following common law enforcement work area assignments; patrol, investigations, administrative or supervisory, support, or other. This question measured the response of the participant to determine if their current duty assignment influences their experiences, perceptions, and attitudes on online learning.

Question 61 asked the respondent to identify their normal work location by asking "What is your County Assignment"? This question measured the response of the participant to determine if the county of assignment influences their experiences, perceptions, and attitudes on online learning. The response to this question was later used to divide participants into a category of urban and rural. The rural and urban designations closely mirror the speed and availability of wireless data service.

Question 62 asked the respondent to categorize themselves into the category of one of the following, male, female, or prefer not to disclose. The question measured the response of the participant to determine if sex influences their experiences, perceptions, and attitudes on online learning.

Question 63 asked the respondent to their highest level of education; high school, AA/AS degree, BA/BS degree, Masters, Doctorate, or other professional certification (CPA, JD, etc.). This question measured the response of the participant to determine if formal education influences their experiences, perceptions, and attitudes on online learning.

Question 64 asked the respondent to identify their native language in one of the following categories; English, Spanish, French, German, or other. This question measured the response of

the participant to determine if their native language influences their experiences, perceptions, and attitudes on online learning.

A request to participate in the survey was sent by departmental email by a senior executive in the respective law enforcement agency. Participants were provided a Uniform Resource Locator (URL) to the anonymous survey in Qualtrics hosted by the University of North Florida. The survey timeline was 14-days with a reminder sent on the 8th day as a reminder to complete the survey on or before April 30, 2018. Below is the request to participate that was sent to the participants.

> Hello, my name is Keith Gaston, and I am a doctoral student at the University of North Florida. I am conducting a research study on the use of distance learning for in-service or professional development training in law enforcement in order to analyze the influence of technology on the professional development learning of law enforcement personnel. The purpose is to improve the effectiveness of distance learning used by law enforcement agencies.
>
> If you take part in my project, you will complete an online survey. I expect that participation in this study will take less than 15 minutes of your time. You may stop and start the survey at will. Your responses will be anonymous. Your agency will not have access to your individual responses; only the final report. Only authorized research personnel will have access to your responses.
>
> Although there are no direct benefits to or compensation for taking part in this study, others may benefit from the information I learn from the results of this study. Additionally, there are no foreseeable risks for taking part in this project. Participation is voluntary, and there are no penalties for deciding not to

participate, skipping questions, or withdrawing your participation. You may choose not to participate in this research without negatively impacting your relationship with your agency.

If you have any questions or concerns about this project, please contact me. You may print a copy of this form for your records if you desire.

If you have questions about your rights as a research participant or if you would like to contact someone about a research-related injury, please contact the chair of the UNF Institutional Review Board by calling (904) 620-2498 or emailing irb@unf.edu.

Thank you for your consideration.

Sincerely,

Keith E. Gaston

Phone:

Email:

By consenting to participate, you are attesting that you are at least 18 years of age and agree to take part in this research study.

Data

Gay, Mills, & Airasian (2012), noted the effectiveness of using survey data to collect and analyze data that tend to explain or predict particular phenomena. This quantitative research methodology is non-experimental and considered a descriptive study. Descriptive studies are used to identify relationships that influence factors with criterion data (Blessing, Chakrabarti, & Wallace (2013). Likert scales were the primary collection tool used to collect the data. Likert

scales are appropriate to collect data using a self-administered survey instrument (Gall, 2007 & Babbie, 1989).

The survey was divided into sections with a total of 64 questions. The survey contains both 5 and 10 point Likert scales and general demographic questions. Links to the survey questions were provided to all sworn law enforcement officers employed by the Florida Fish and Wildlife Conservation Commission and Florida Highway Patrol. The use of a 5 and 10 point continuous Likert scaling was used to measure the opinion and attitude of the law enforcement officers. Likert, Roslow, and Murphy researched in 1932 comparing various methods of obtaining opinions. They compared standard at the time known as the Thurstone Attitudes Scales to a much simpler method known today as the Likert or Likert-like scale. The research revealed the simpler Likert-like method was much simpler and highly reliable. This allowed the participants to rate the degree to which they agreed or disagreed with each statement or question. While the numerical assignment does not measure a quantity, it did allow for ranking. The numerical assignment to the response categories allowed for additional statistical techniques for further analysis (O'Sullivan, Rassel, & Berner, 2003). Demographic coupled with additional questions regarding computer hardware was used to describe the participants and to create additional categories used for enhanced statistical analysis. The data from the surveys were coded using SPSS Statistics 25 (2017).

Survey Instrument

The survey instrument (Appendix A) and letter of introduction (Appendix B) followed acceptable performance standards as approved by my dissertation committee and the Institutional Review Board (Appendix C). Survey participants were provided an introduction from the principal investigator describing the problem statement and the potential benefits of completing

the survey. The introduction also provided the consent documents as approved by the Institutional Review Board. Finally, survey participants were thanked for their time and effort in completing the survey. No compensation or other inducement was offered for completing the survey. No Internet Protocol addresses (IP address) or other personally identifiable information were collected during the survey process to ensure the anonymity of the respondent.

Survey Timeline and Responses

The survey was launched on April 15, 2018, to 2,750 state law enforcement officers located in the state of Florida and concluded on April 30, 2018. 496 responses were received with a response rate of 18%.

Data Analysis

Descriptive statistics were used to summarize the raw data into usable information. Statistical review and analysis of data were completed using descriptive statistics and crosstab analysis to obtain a percentage of response to individual questions. Additional analysis was conducted using one-way ANOVA analysis that provided a Person correlation coefficient (Person *r)* to determine the strength of the relationship between the variables.

The following hypotheses were tested:

H_1 – There is no statistically significant difference in the influence of connectivity on the perception of online distance learning for the professional development of Florida state law enforcement officers.

H_2 - There is no statistically significant difference between classroom, online, and blended learning that affects the perception of online distance learning for the professional development of Florida state law enforcement officers.

H_3 – There is no statistically significant difference between age, race or national origin, sex, or years of experience affects the perception of online distance learning for the professional development of Florida state law enforcement officers.

H_4 – There is no statistically significant difference between level of education and training on the perception of online distance learning for the professional development of Florida state law enforcement officers.

H_5 – There is not statistically significant difference between the duty assignment on the perception of online distance learning for the professional development of Florida state law enforcement officers.

Recoding of Variables

Participants were asked to identify their primary county of assignment. A recode of the data was completed to categorize the respondent into an urban or rural classification based on population density and classification by the U.S. Census Bureau. The reclassification was necessary to correlate to the availability of wireless data and speed.

Study Limitations

Non-experimental studies have limitations on the ability to determine cause and effect relationships. The data used in the study are self-report which may affect the interpretation of these data. Participants will select responses that appear socially desirable even though their responses are anonymous. Bias may also occur when participants are affected by events in their life at the time of the survey (Johnson & Christensen, 2008).

Summary

Chapter 3 summarized the quantitative methodology used for this study. Specifically, descriptive survey research was used to examine survey data submitted by law enforcement

officers employed by FHP and FWCC to determine their experience, perceptions, and attitudes on using online distance learning technology for professional development learning. This chapter reviewed the research question and hypotheses along with the research design. The rationale behind each question was discussed along with the testing of the survey instrument for validity and reliability. The researcher experience and bias were described along with a detailed review of the survey questions. The description of the study population and the limitations of the study were also discussed. The data collection methods were described along with the survey instrument timeline and responses. The survey was launched on April 15, 2018, to 2,750 state law enforcement officers located in the state of Florida and concluded on April 30, 2018. 496 responses were received with a response rate of 18%. The data was analyzed using Statistical Package for the Social Science (SPSS) version 25 (IBM Corporation, 2017).

Chapter 4 provides the detailed research findings of the data collected from the survey.

CHAPTER 4

DATA ANALYSIS

Introduction

Law enforcement agencies and law enforcement training centers have failed to utilize or embrace distance-learning technologies, or they have adopted distance-learning technology without knowing the effectiveness of the training or learning. The law enforcement profession has historically used traditional classroom lectures for education and hands-on demonstration for training. Students are provided instructional information; they are then required to demonstrate understanding through examinations or through practical applications with a designated trainer or instructor to ensure proficiency (Johnson, 2010). The current online distance learning programs used by law enforcement agencies and training centers involves asynchronous, one-way transfer of information. Law enforcement agencies and training centers should review the use of distance-learning technologies to determine which distance-learning programs and applications provide effective and efficient learning for their law enforcement personnel.

For distance-learning to be effective, the student must be engaged and motivated to learn. Maguire (2005) found evidence to support personal motivation and interest in the technology of learner as the primary reason distance-learning is useful. Researchers have found that inclusion, attitude, meaning, and competence are four essential ingredients of intrinsic motivation for learning.

The primary duties and responsibilities of law enforcement are to prevent crime, conduct criminal investigations along with apprehending criminals. That aspect of police work has not changed over the last 100 years. However, the technology used to complete these fundamental duties has changed and continues to change rapidly. The rapid change in how information,

especially with the widespread use of social media, is shared has dictated law enforcement agencies must change and adapt to emerging technologies, including how officers learn. The primary purpose of this study was to determine what factors influence the experiences, perception, and attitudes of using distance-learning technology for the delivery of education and training to state law enforcement personnel employed by the state of Florida for professional development training for the rapid sharing of intelligence and information that translates into officer safety and techniques for a reduction in crime.

An online survey was conducted of sworn law enforcement officers employed by the Florida Highway Patrol and the Florida Fish and Wildlife Conservation Commission to determine to analyze the factors that influence the experiences, perceptions, and attitude of certified law enforcement personnel toward the use of online distance-learning for professional development training. The survey instrument was delivered via Qualtrics hosted by the University of North Florida. Qualtrics is a simple to use, but powerful online survey tool to conduct survey research, analysis responses and other data collection activities (Qualtrics, 2018). Qualtrics was selected for the administration of the survey because it provided anonymity and convenience for the person responding to the questionnaire. The link to the survey was sent to approximately 2,750 personnel which represent 67% of the total state law enforcement officers in Florida. The Florida Highway Patrol (FHP) employs approximately 1,950 certified law enforcement personnel, including personnel dedicated to the enforcement of federal and state commercial vehicle laws and regulations. The Florida Fish and Wildlife Conservation Commission (FWCC) has approximately 800 officers throughout the state of Florida. The 2,750 officers employed by these two agencies represent 67% of the total state law enforcement officers in Florida. The remaining 33% of state law enforcement personnel are employed in

investigative or regulatory enforcement agencies. The state law enforcement officers assigned to investigative or regulatory duties are generally assigned a desk with a wired Internet connection. The wired network connection negates the connectivity issue often experienced by personnel assigned to vehicles with a laptop computer and air card. Investigative and regulatory law enforcement positions are not assigned rotating shifts and rotating days off. Law enforcement officers and troopers employed with FWCC and FHP are each issued ruggedized laptops with Windows 7 Enterprise operating system along with an air card for connectivity. AT&T or Verizon provide the air card service for connectivity to the Internet. Personnel employed by these agencies complete all reports and document all activities during their shift electronically, including completing professional development training via their laptop. It is because of this level of connectivity the researcher felt FWCC and FHP personnel were ideal candidates to participate in this research. One of the key research questions is how connectivity affects the perception of distance learning for the professional development of state law enforcement personnel. The researcher bias expected a relatively high percentage of participants to be competent with the use of computers because of the required daily use to complete their daily work assignments.

Analysis Approach

A large amount of data was collected as a result of the online survey taken by members of the Florida Fish and Wildlife Commission and Florida Highway Patrol. This large amount of data required careful review and analysis to make the information meaningful and useful. As we have moved into the information age, additional statistical analysis techniques have been developed to assist with analyzing large amounts of data. The most basic analysis involves central tendency commonly known as mean, median, and mode. The mean is the arithmetic

average of the scores in a distribution. The median is the point on the scale of measurement where 50 percent of the scores fall. The mode is the most frequent score in a distribution of scores (Hinkle, Wiersma, & Jurs, 2003). Statistics can be descriptive, inferential, univariate or multivariate. Descriptive statistics are used to describe and summarize the data collected for a study. Descriptive statistics provides the researcher a way to simplify a large amount of data into manageable information. Inferential statistics are used to make interpretations of the data to make inferences about cases not explicitly studied. Inferential statistics are used to make decisions that an observed difference between the different group is a reliable observation or that it may have transpired by chance. Univariate statistics describe the distribution of the values of one particular variable. Multivariate statistics use techniques to investigate the joint relationship between several variables. It is the ability to investigate the joint relationship that allows researchers to obtain specific information on the influence of factors that would be controlled in an experimental study (O'Sullivan, Rassel, & Berner, 2003). Another essential analysis tool is dispersion or the spread around the central tendency. Data dispersion is frequently represented as a box plot. The box plot or dispersion can be used to identify any unusual scores in the distribution, also known as outliers. The identification of outliers may warrant additional investigation by the investigator to determine why the outlier exists (Hinkle, Wiersma, & Jurs, 2003). A frequency distribution list or table list the values or categories for each variable and the number of times with each value. The categories in the frequency distribution table or list must be organized to capture every variable. Frequency distribution tables are a valuable resource to present all type of data, specifically nominal and ordinal data that originates from the survey.

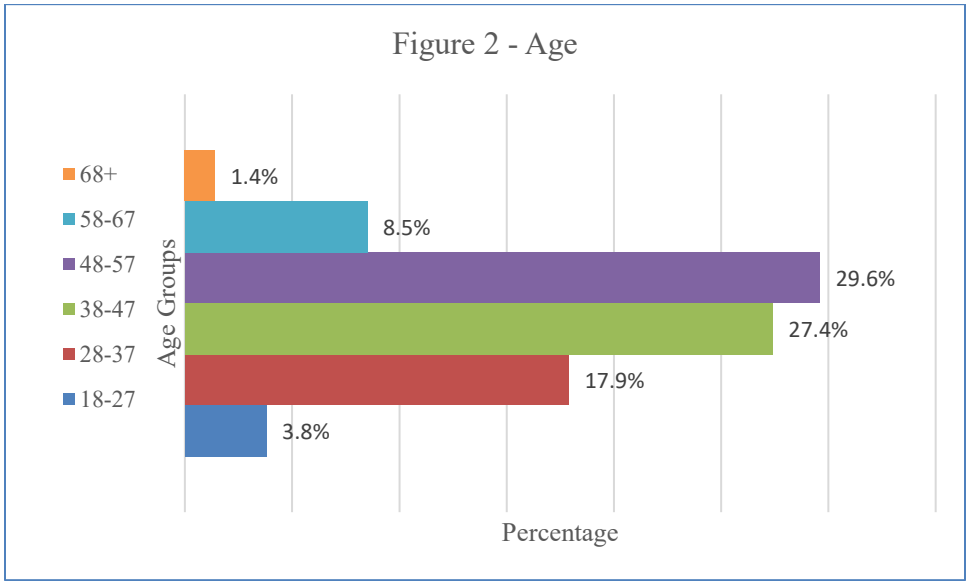
Survey Results – Participant Demographics

The survey was launched on April 15, 2018, and closed on April 30, 2018, with 496 responses received for a response rate of 18%.

The following tables and figures provide demographic or descriptive statistics related to the questions of age, race, years of experience as a law enforcement officer, sex of the officer and native language.

Age

When asked their age, 440 out of the 496 responses or 88.6% of the participants provided their age. Seventy-five percent or 372 of the law enforcement participants were between the ages of 28 and 57. Figure 2 presents the cohort of ages and their percentages.

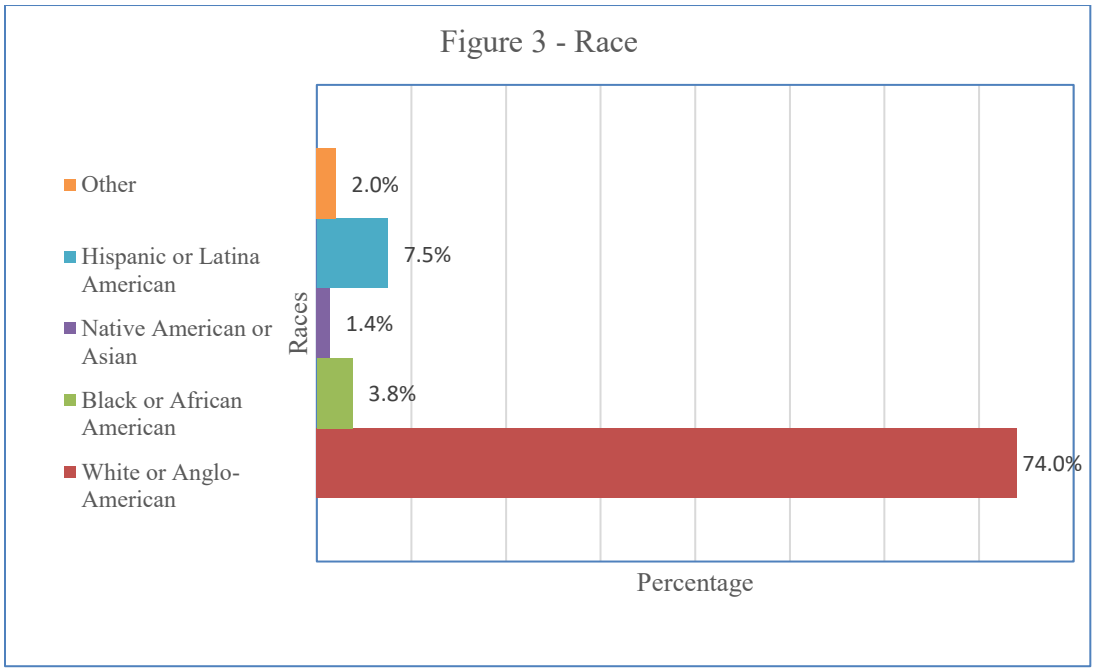


11.4% Did Not Respond

Race

Participants were asked what race they consider themselves. Three hundred sixty-seven or 74% reported their race or ethnicity as White or Anglo-American, 7.5% consider themselves

as Hispanic or Latin, followed by 3.8% who considered themselves as Black or African-American. Only seven or 1.4% considered themselves as Native American or Asian with 10 or two percent considering themselves some other race, ethnicity, or national origin. Figure 3 presents the races and their percentages.

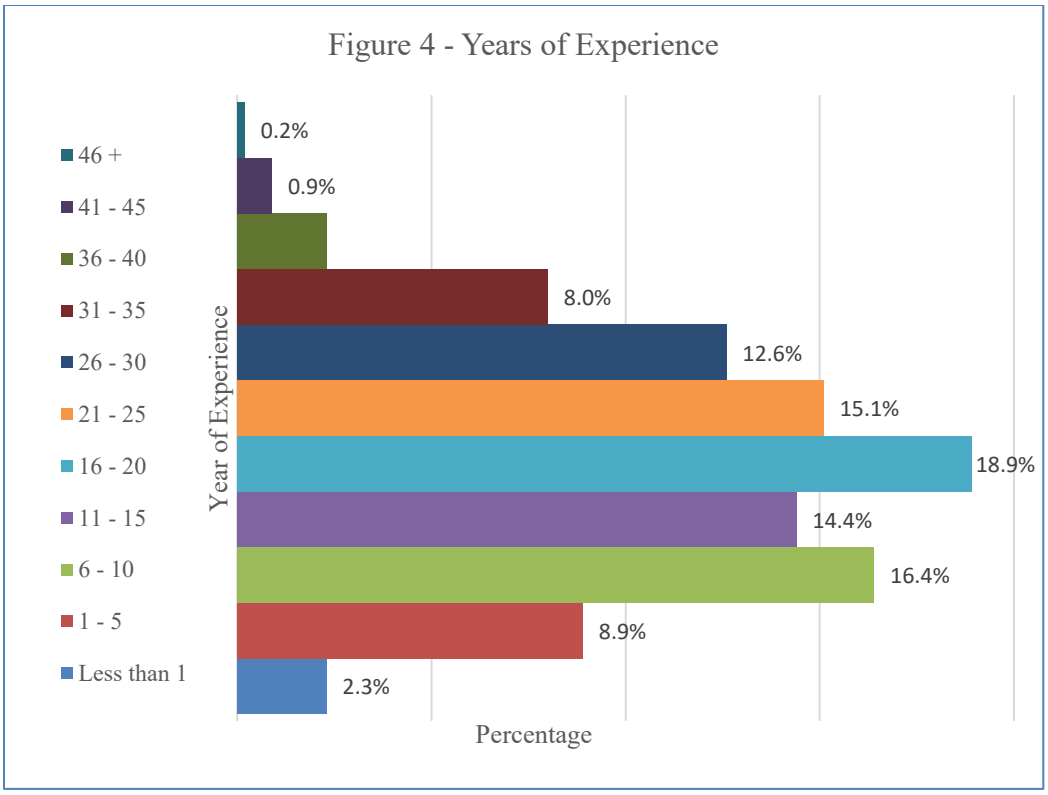


Years of Experience

The participants were asked about their years of experience as a full-time law enforcement officer. Note that years of experience as a state law enforcement officer may vary when compared to years of experience with a local law enforcement agency as some officers begin their career as a local law enforcement officer then hired as a state law enforcement officer. For purposes of this study, the years of experience are cumulative years of experience as a full-time law enforcement officer, regardless of the law enforcement agency. It should be noted that state law enforcement officers are part of the Florida Retirement System (FRS) that allows law enforcement officers to retire after 25-years of special risk service. FRS provides the

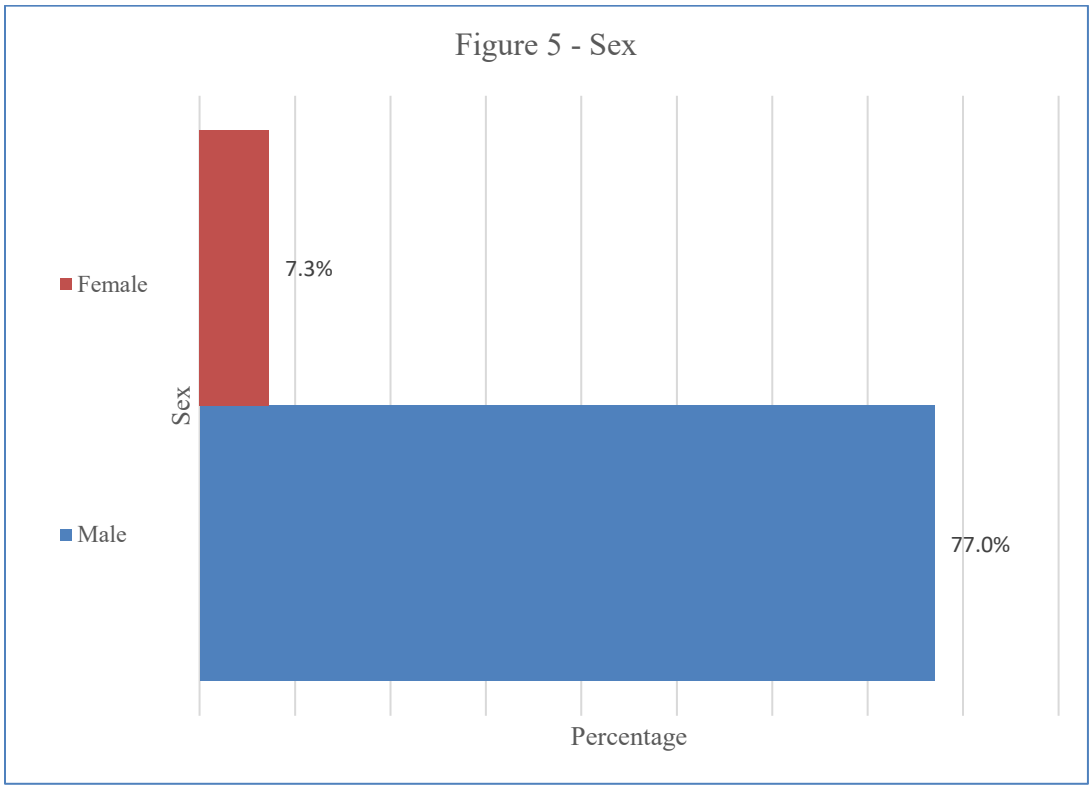
opportunity for an additional 5-years of service in the Deferred Retirement Option Program (DROP) for a total of 30-years of service. Three hundred thirty-nine or 68.3% have six to 30 years of experience with 50, or 10.1% of the participants have more than 30-years of experience.

Figure 4 presents the years of experience and their percentages.



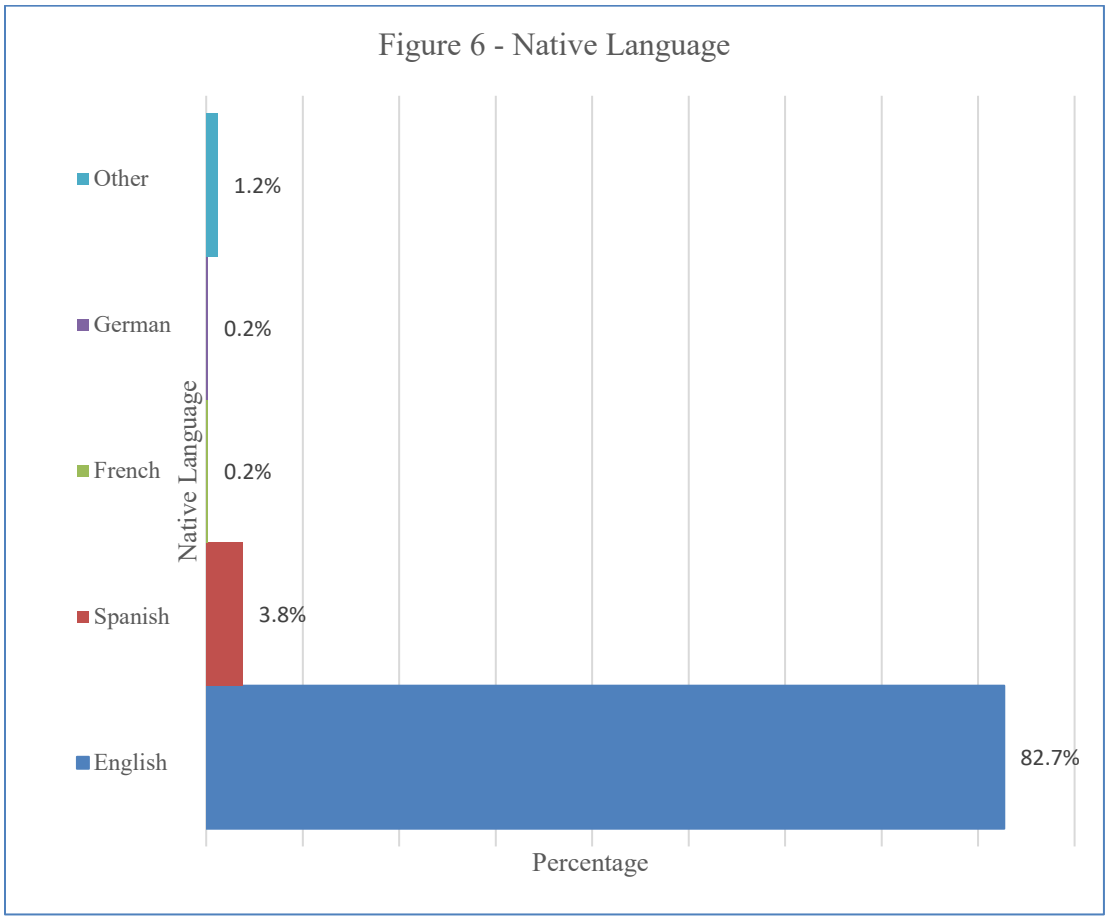
Sex

Participants were asked to provide their sex. Seventy-eight or 15.7% did not disclose their sex. Thirty-six or 7.3% indicated they were female with 382 or 77% indicating they were males. Figure 5 presents the percentages of males and females who participated in the survey.



Native Language

Participants were asked their native language. Fifty-nine or 11.9% did not respond while 410 or 82.7% said English was their native language. Nineteen or 3.8% said Spanish was their native language with one or 0.2% stating their native language was French or German. Six or 1.2% indicated their native language did not fall into one of the other categories. Figure 6 presents the native languages and their percentages.



Work-Related

The next five questions were work-related questions. Table B6 – Work-Related in appendix B provides basic statistics of the mean, median, mode, standard deviation, and variance for the responses received. The first question asked the participant if they felt online learning provides the knowledge to do their job. 66.5% of the participants agreed that online learning provides the knowledge to do their job while 19,2% were neutral on the issue, and 9.7% disagreed as presented in Figure 7 below.

The second question asked their current assignment with their department. 35.7% were assigned to Patrol, and 39.1% to Investigations, 19.0% to a supervisory or administrative position and 6.2% were in a support position as illustrated by Figure 8.

The third question asked about their level of education. 36.3% of the participants had completed high school education. It is also noted the minimum requirement to be a law enforcement officer in the state of Florida is a high school degree. 25.0% had completed an AA, or AS degree, 29.0% had completed a BA or BS degree, 5% had completed a Master's degree, 3.8% had other professional certification such as Certified Public Account, Juris Doctorate, or similar certification, and 0.6% had completed a doctorate as presented in Figure 9.

The fourth question asked if they were a certified Criminal Justice Standards Training Commission instructor. Anyone who provides training to a basic law enforcement training recruits or provides instruction in areas considered high-liability, such as firearms or defensive tactics, must be certified by the Florida Department of Law Enforcement Criminal Justice Standards and Training Commission. 44.8% of the participants stated they were a certified CJSTC instructor, 44.0% were not an instructor, and 11.3% did not respond to the question as presented in Figure 10.

The final question related to work asked the participant their county of assignment. Every state law enforcement officer, agent or trooper in the state of Florida is assigned a position number, and the position number is assigned to the county. Each participant was asked their county of assignment and based on their response they were placed into a category of Urban or Rural, based on the population density as defined by Florida statutes 381.0406. 74% of the participants lived in a county designated as metropolitan compared to 13.1% who lived in a rural county. There were 12.9% who did not respond to the question. Figure 11 presents the comparison of personnel assigned to a metropolitan or rural county.

Figure 7
Online learning provides the knowledge to do my job

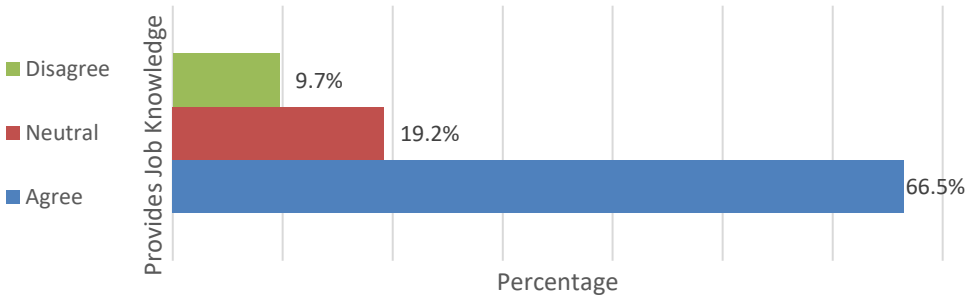


Figure 8
What is your current assignment with your department

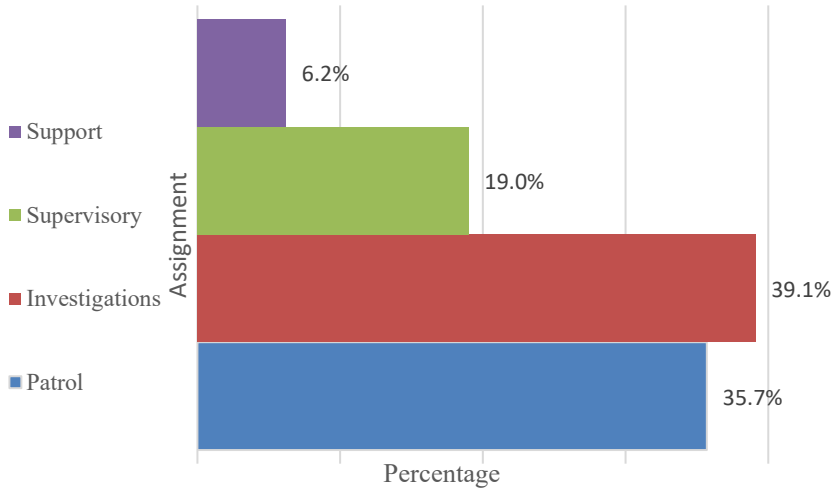


Figure 9
What is your highest level of education

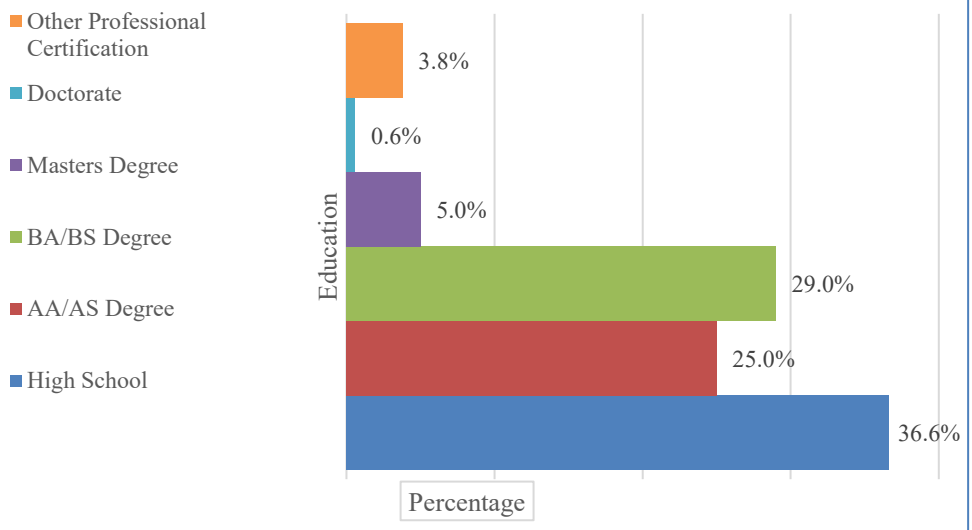
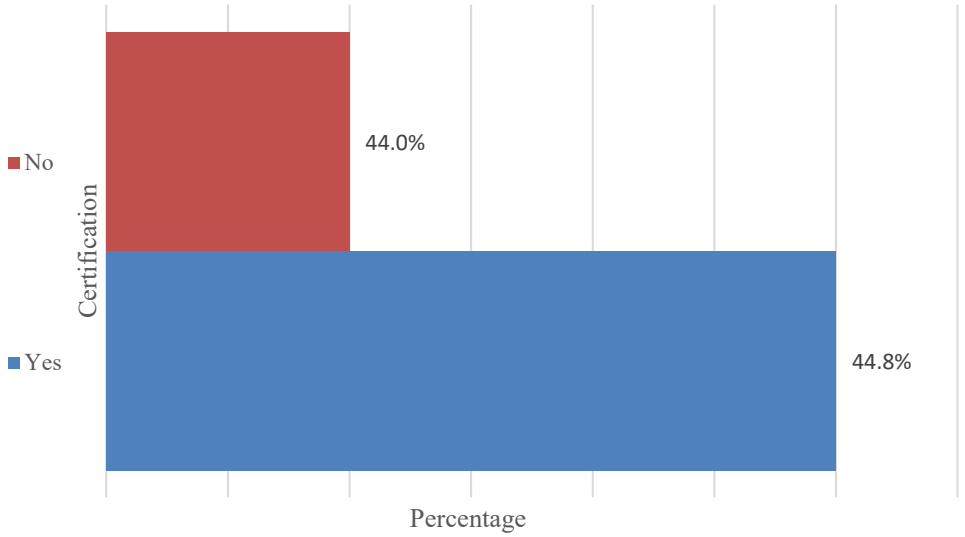
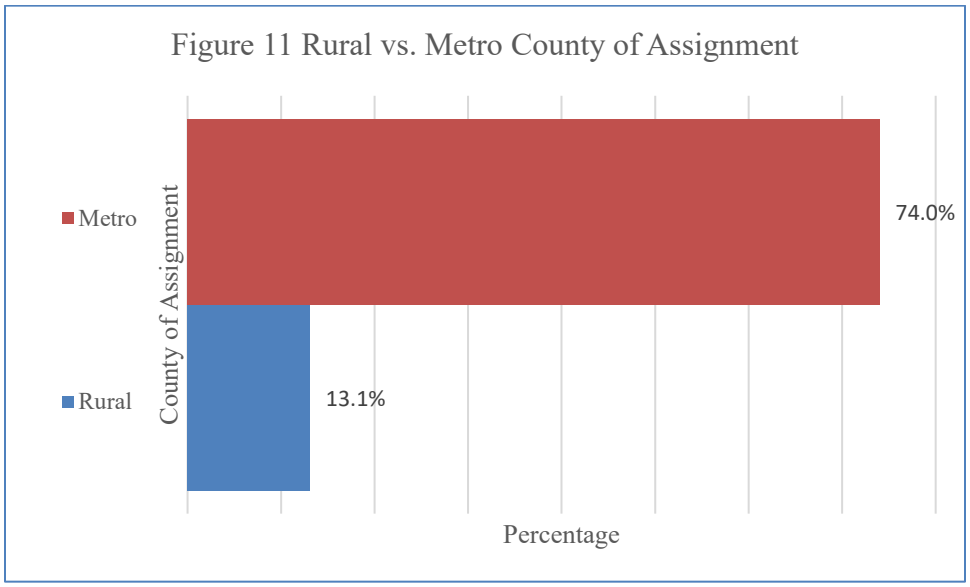


Figure 10 - CJSTC Instructor Certification





Reading and Writing

The next eight questions asked about their ability to read and write. Table B7- Reading, in Appendix B provides the mean, median, mode, standard deviation, and variance about their perceived reading skills.

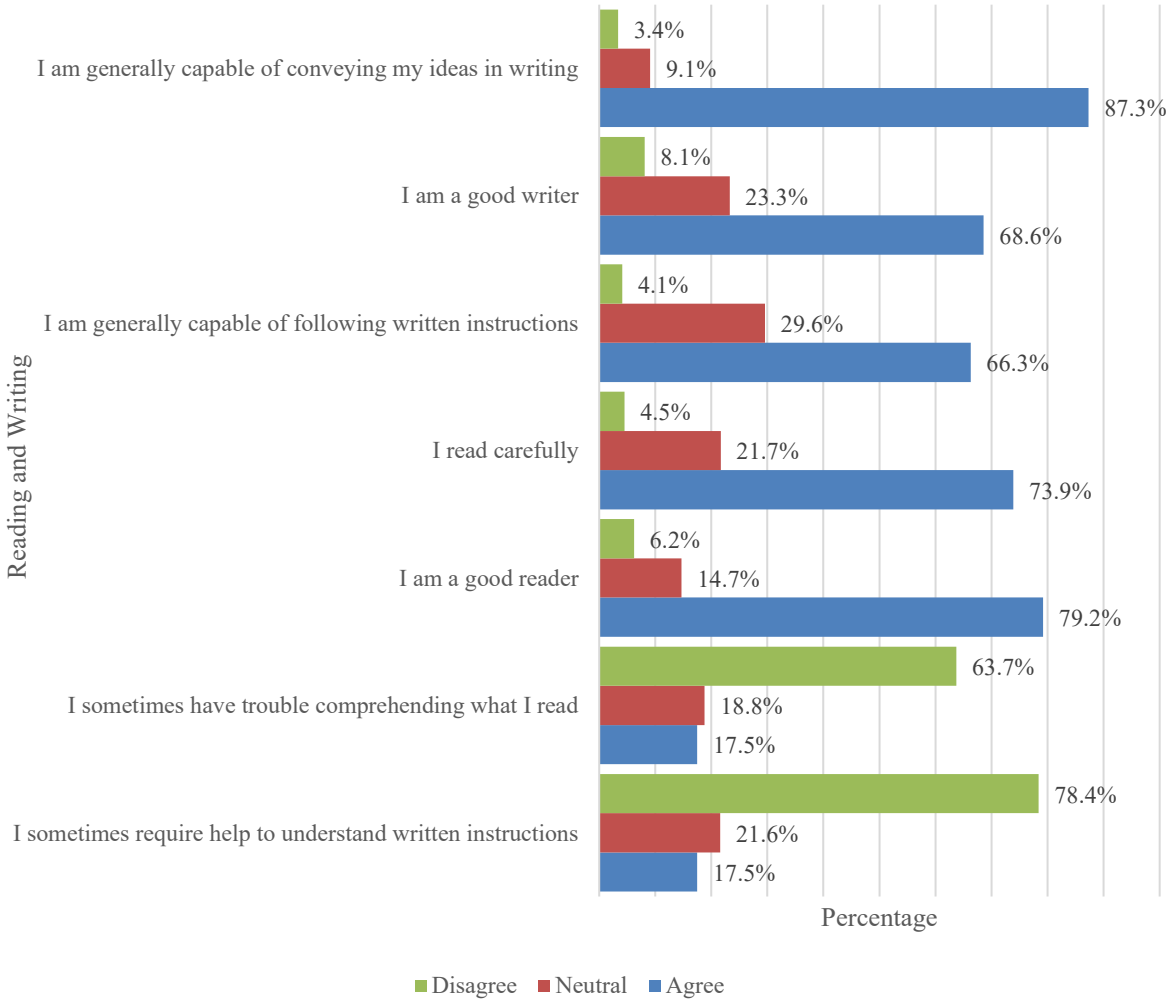
The first question of this series of questions begins with, I sometimes require help to understand written instructions, 17.5% agreed, 21.6% were neutral, and 78.4% disagreed. The second question, I sometimes have trouble comprehending what I read, 17.5% agreed, 18.8% were neutral, and 63.7% disagreed. The third question, I am a good reader, 79.2% agreed, 14.7% were neutral, and 6.2% disagreed. The fourth question, I read carefully, 73.9% agreed, 21.7% were neutral, and 4.5% disagreed. The fifth question, I am generally capable of following written instructions, 66.3% agreed, 29.6% were neutral, and 4.1% disagreed. The sixth question asked, in the past year, how many books have you read, 18.5% had read no books in the last year, 49.2% had read one to five books, 14.3% had read six to 10 books, 4.2% had read 11 to 20

books, and 2.6% have read 20 plus books in the last year. Figure 12 presents the responses received from the first five questions.

The next two questions asked about their perceived ability to write. Table B8 in Appendix B provides the mean, median, mode, standard deviation, and variance for the next two questions.

The first question of this series of questions begins with, I am a good writer, 68.6% agreed, 23.3% were neutral, and 8.1% disagreed. The second question, I am generally capable of conveying my ideas in writing, 87.3% agreed, 9.1% were neutral, and 3.6% disagreed.

Figure 12 - Reading and Writing

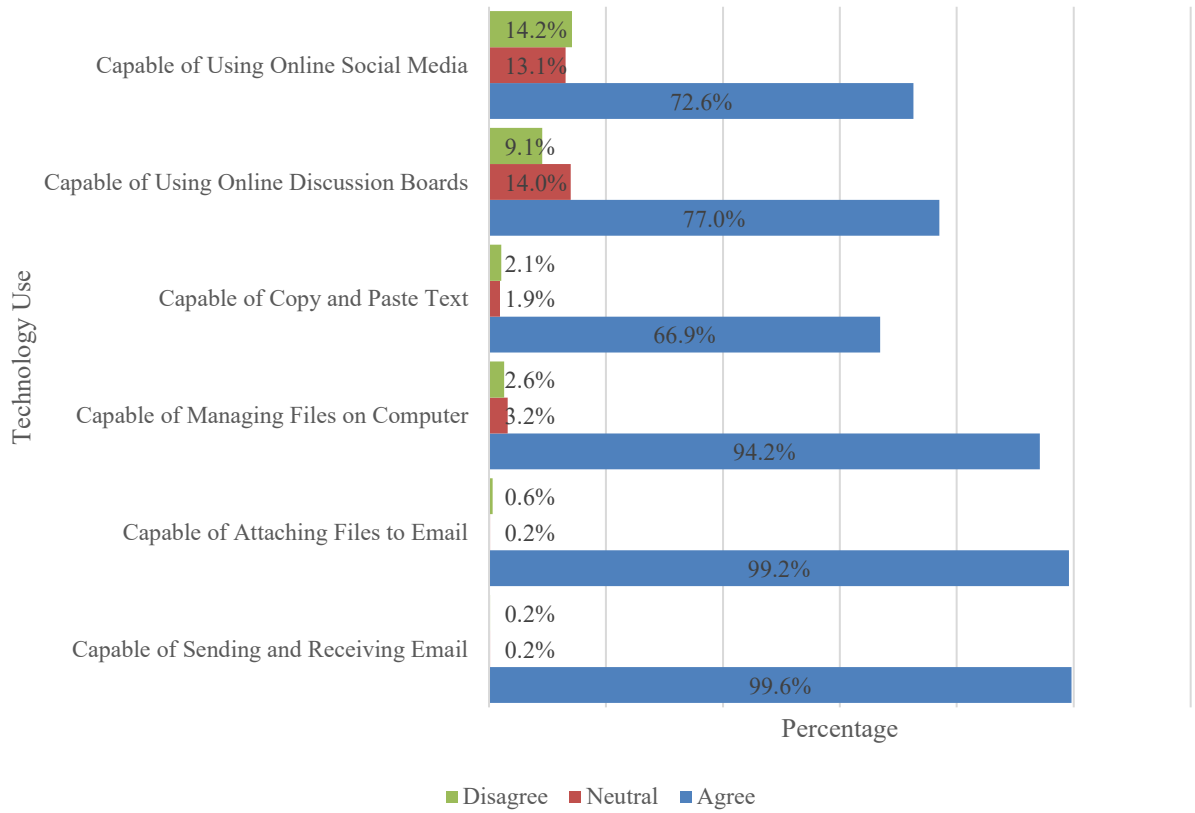


Technology Use

The ability to use available technology is essential for online line distance learning. The following 14 questions asked the participants to respond how they viewed themselves cognitively and conatively, which affects their experiences, perceptions, and attitudes toward distance learning. The first six of 14 questions asked about their abilities to use a computer or technology, such as sending an email, attaching files to an email, managing the files on the computer, ability to copy and paste, manage an online discussion, and their use of social media. When asked about capability on sending and receiving email, 94% agreed, with only one person or 0.2%, stated they were neutral and one person stating they disagreed. The next questions asked about their capability on attaching files to an email, 93.5% agreed they could attach a file to an email, with 0.4% stating they were neutral and 0.2% stating they could not attach a file to an email. When asked about their capability of managing files on a computer, 88.9% agreed they could manage files on a computer with 3.0% being neutral, and 2.4% stated they could not manage files on a computer. The next question asked about their capability to copy and paste text using a computer, 90.1% agreed they were capable of copying and pasting text using a computer with 1.8% being neutral, and 2.0% stating they could not copy and paste using a computer. When asked about their capabilities of using online discussion boards, 72.2% agreed they could use an online discussion board while 13.1% remained neutral and 8.5% did not feel the could use a discussion board. The final question in the group of questions asked about their capability to use online social media such as Facebook or Twitter, with 68.0% stating they can use social media while 12.3% were neutral and 13.3% stating they were not capable of using social media.

Table B9 in appendix B offers insight into the level of comfort the participants had with the use of computers and technology. The variance for the first two questions which are email related the variance was 0.214 and 0.267. The next two questions which are computer or software related the variance is .482 and .409. The last two questions which would generally not be work-related activities, the variance moves to, 956 and 1.276. Figure 13 graphically illustrates the participant's response to the use of technology.

Figure 13 - Technology Use



The next eight questions were also related to technology use. Table B10 – Technology Use Part 2 in Appendix B provides basic statistics of the mean, median, mode, standard

deviation, and variance for the responses received. The first question, additional training would increase my use of technology resulted in 69.5% of the participants agreeing additional training would increase their use of technology, while 21.9% were neutral on the issue and 7.6% did not feel additional training would increase their use of technology. The second question stated I have had adequate training in technology use. 46.5% agreed with the statement, 32.0% were neutral, and 21.6% disagreed with the statement. When asked if they felt they were prepared to effectively use technology in their job, 78.2% felt they were prepared with 17.0% were neutral on the issue and 4.8% did not feel they were prepared to effectively use technology in their job. Figure 14 presents the participant's responses to the questions.

The next question asked where the participants obtained most of their information about current news events. 38.3% stated they relied on the Internet with a similar percentage of 36.3% stating they depended on the radio or television for their new. 8.7% stated they used social media to get their news and 3.8% said they talked to people for news. Only nine people or 1.8% indicated they read the newspaper for current news events. A detailed analysis of the those who read the newspaper for their current events revealed no one between the age of 18-37 read the newspaper for their current news events. Two people between the age of 38-47, five people between the age of 48-57, and two people between the age of 58-67 relied on the newspaper for news. Figure 15 shows the percentage of use for each media source.

The next four questions were designed to capture the number of hours the participant used a computer. The first in the series asked in an average week, how many hours do you use a computer at work. As expected, 58.5% indicated more than 20 hours in a week with 15.5% stating 11 to 20 hours per week, 11.0% use a computer at work six to 10 hour, and only 5.0% use a computer between one to five hours per week. Two people indicated they used a computer less

than one hour per week and both are between the age of 58 and 67. The second question asked in an average week, about how many hours do you use a computer at home. The percentages shifted significantly between the use at work and the use at home. Only 6.7% stated they used a computer for more than 20 hours at home and 9.9% used a computer at home between 11 and 20 hours. 18.5% used their home computer between six to 10 hours, and 34.5% used their computer one to five hours with the remaining 19.4% using their computer for less than one hour at home. The third question asked approximately how many hours they surfed the Internet. 6.5% stated they surfed the Internet more than 20 hours each week and 9.5% said they surfed the Internet between 11 to 20 hours. 21.0% surfed the Internet six to 10 hours, 37.9% stated the surfed one to five hours and 13.9% surfed the Internet for less than one hour. The final question asked how many hours per week do you play video games. Six participants or 1.2% stated they played video games more than 20 hours per week. A detailed analysis of those six participants revealed two were between the age of 28-37, one between the age of 38-47, one between the age of 48-57, one between the age of 58-67 and one with unknown age. No correlation was found between age and the number of hours playing video games. Figure 16 shows the hours of use percentage for each of the previous four questions.

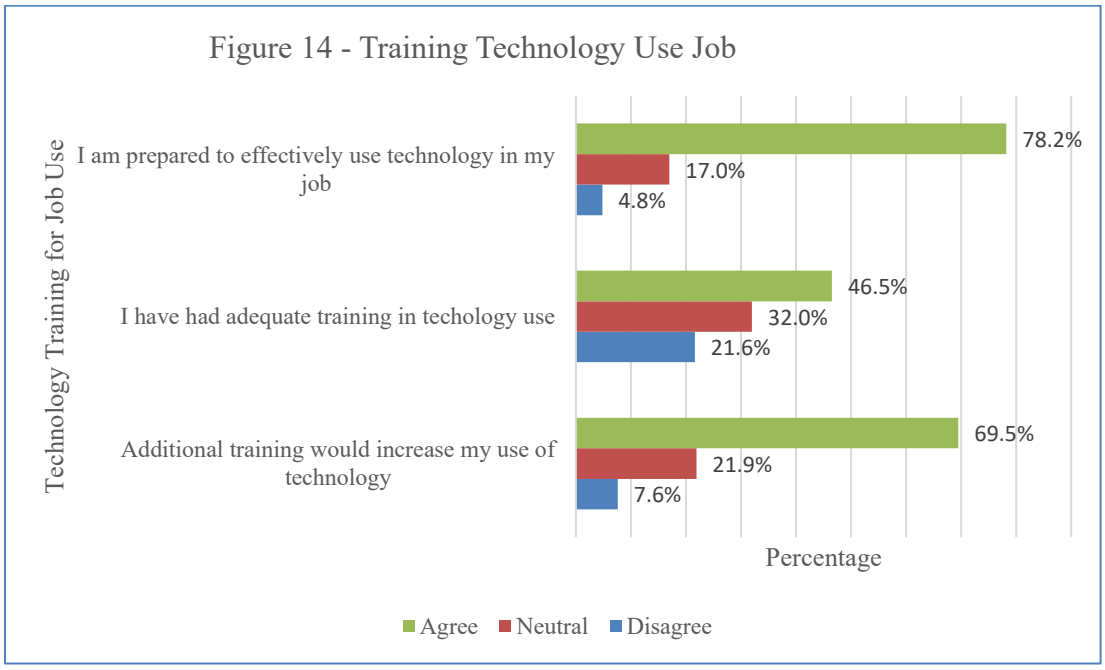


Figure 14 - Training Technology Use Job
Technology Training for Job Use
I am prepared to effectively use technology in my job
I have had adequate training in techology use
Additional training would increase my use of technology
78.2%
17.0%
4.8%
46.5%
32.0%
21.6%
69.5%
21.9%
7.6%
Percentage
Agree
Neutral
Disagree

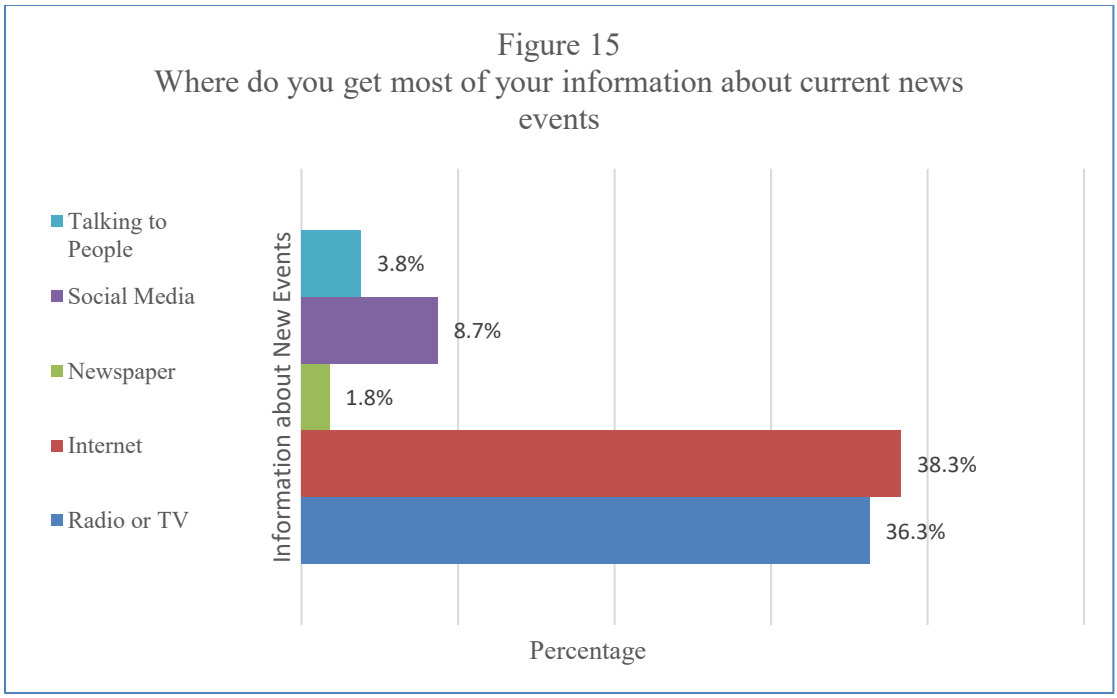
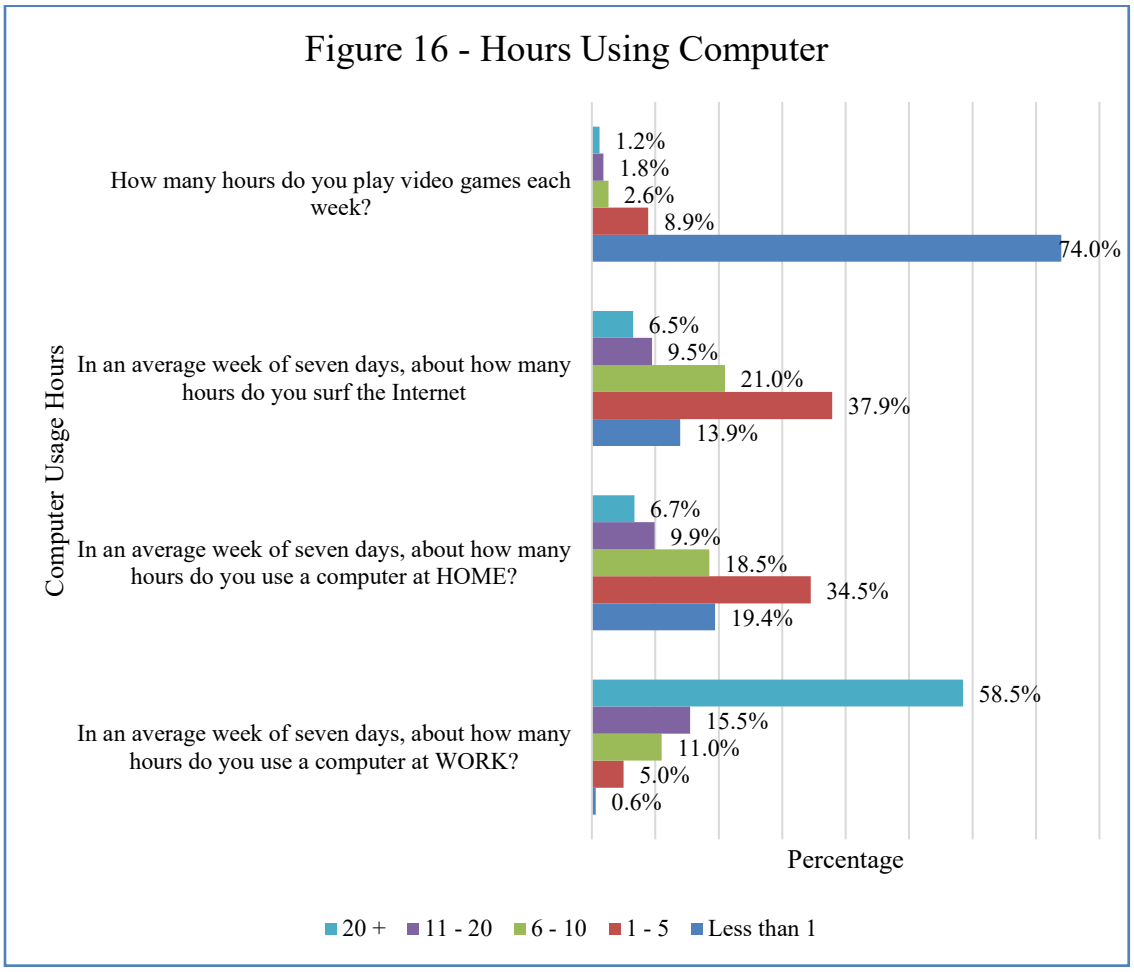


Figure 15
Where do you get most of your information about current news events
Talking to People
Social Media
Newspaper
Internet
Radio or TV
Information about New Events
3.8%
8.7%
1.8%
38.3%
36.3%
Percentage

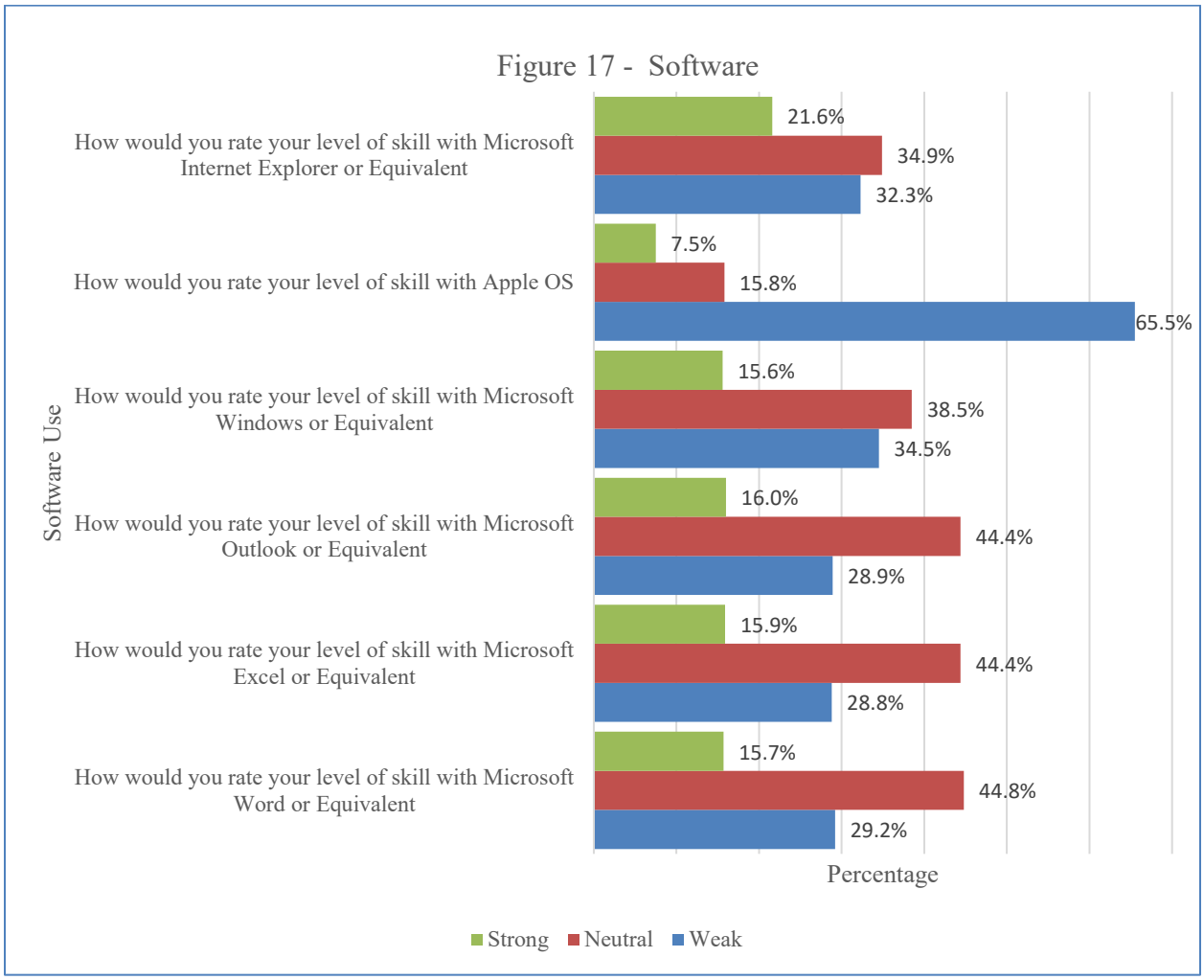


Software

The next six questions were related to the use of common software. Table B11 – Software, in Appendix B provides basic statistics of the mean, median and mode for the responses received. The first question asked the participants to rate their level of skill with Microsoft Word or equivalent, 29.2% rated their skill as weak, 44.8% rated their skill as neutral, 15.7% rated their Word skills as strong. The second question asked them to rate their level of skill with Microsoft Excel or equivalent, 28.8% said their Excel skills were weak, 44.4% were neutral, and 15.9% rated their Excel skills as strong. The third question asked them to rate their level of skill with Microsoft Outlook or equivalent, with 28.9% stating their Outlook skills were weak, 44.4% were neutral, and 16.0% rated their Outlook skills as strong. Question four asked

how they would rate their level of skill with Microsoft Windows or equivalent, with 34.5% stating their Windows skills were weak, 38.5% were neutral, and 15.6% stated their Windows skills were strong. The next question asked how they rated their level of skill with Apple operating system, 65.5% rated their Apple skill as weak, 15.8% were neutral, and 7.5% indicated they had strong skill with Apple The final question asked how they rated their level of skill with Microsoft Internet Explorer or equivalent, 32.4% stated their skill level was weak, 34.9% stated they were neutral, and 21.6% stated they had a strong skill level with Internet Explorer or equivalent.

The skill level ratings were consistent with researcher expectations considering all FHP and FWC members are provided computers with Microsoft Office Suite with Windows 7 Enterprise as the operating system. It was also noted the difference in variance for Microsoft Word, Excel, Outlook, and Windows only varied by 0.038 (Windows 0.784 – Word 0.746) which is consistent with the frequent use of Microsoft Office products. Figure 17 graphically represents the survey results for the software use questions.

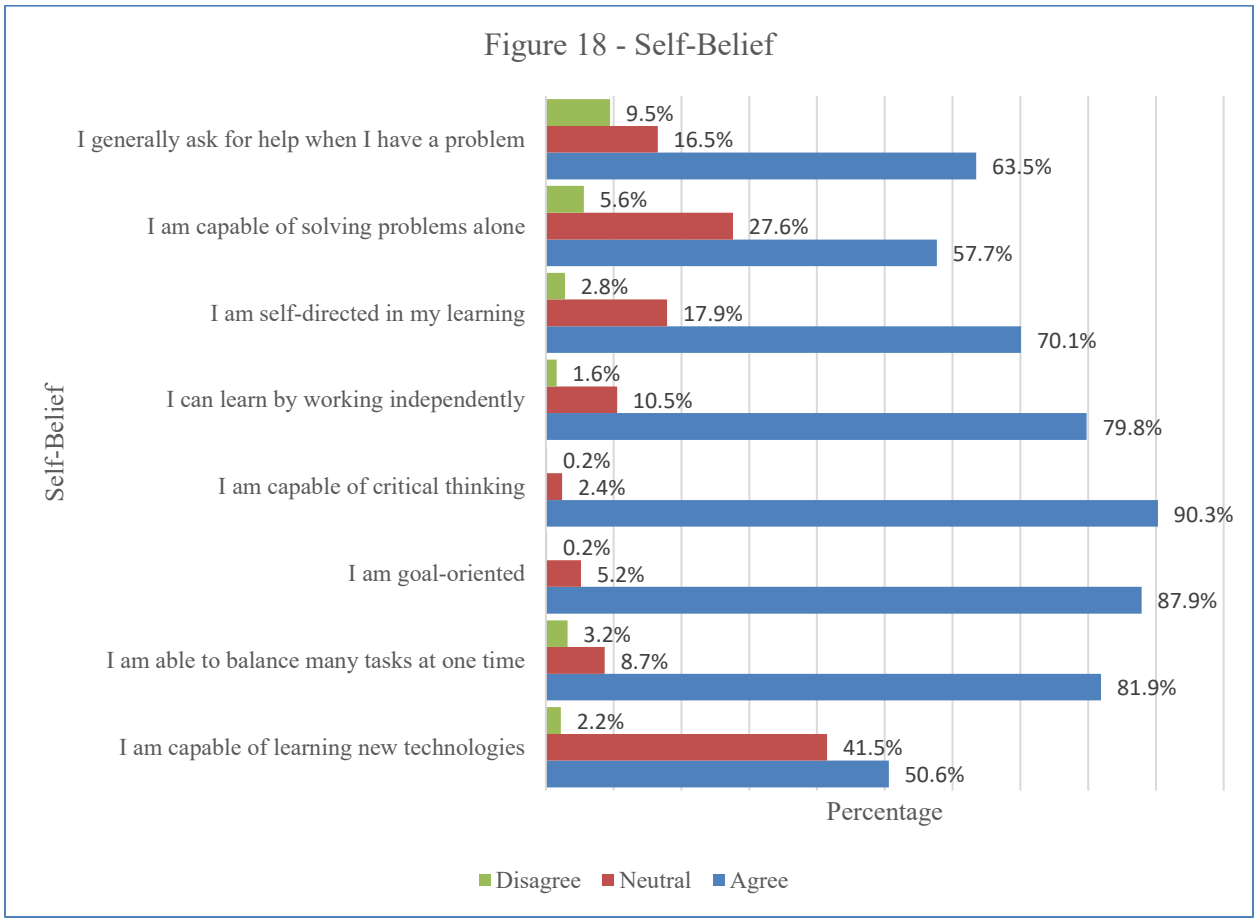


Self-Belief

The next nine questions asked about self-belief in their knowledge, skills, and abilities. Table B12 in Appendix B provides the mean, median, mode, standard deviation, and variance for the next nine questions. The variance runs from a high of 0.689 to a low of 0.288 for a range of 0.401.

The first question asked if they can learn new technologies with 50.6% agreeing, 41.5% were neutral, and 2.2% disagreed. When asked if they were able to balance many tasks at one time, 81.9% agreed, 8.7% were neutral, and 3.2% disagreed. When asked if they felt like they were goal-oriented, 87.9% agreed, 5.2% were neutral, and only 0.2% disagreed. When asked if

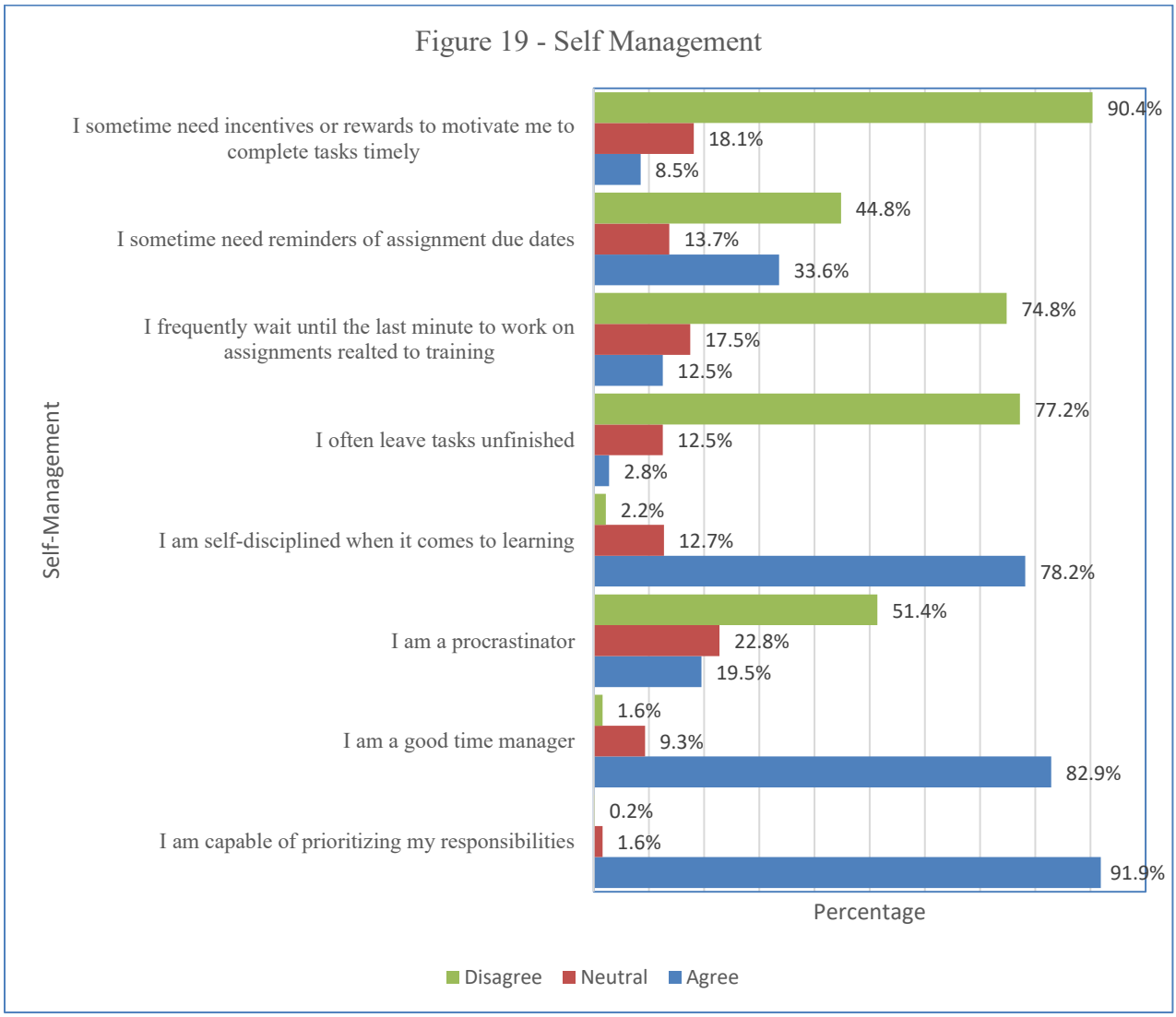
they felt like they we capable of critical thinking, 90.3% agreed, 2.4% were neutral, and only 0.2% disagreed. When asked if could learn by working independently, 79.8% agreed, 10.5% were neutral, and 1.6% disagreed. When asked if they felt they were self-directed in their learning, 70.1% agreed, 17.9% were neutral, and 2.8% disagreed. The next question asked if they felt they could solve problems alone, 57.7% agreed, 27.6% were neutral, and 5.6% did not believe they could solve problems alone. As a follow-up to the previous questions, the participants were asked if they generally ask for help when they had a problem, 63.5% agreed they would ask for help, 16.5% were neutral, and 9.5% disagreed and would not seek assistance. The last question asked if they felt comfortable with learning new skills, 85.1% agreed they were comfortable learning new skills with 4.4% neutral, and only 0.2% disagreed. Figure 18 graphically illustrates the responses received from this series of questions.



Self Management

The next eight questions asked about their self-management as it is interrelated to distance learning. In a traditional classroom setting the students are assigned tasks, have interactions, lectures, and discussions, along with the submission of assignments. Distance learning is very different in the respect the student is 100% responsible for all reading, discussions, and assignments. Students must read the presented material and generally post a recap of their reading in the form of a discussion board. It is for this reason that being disciplined and able to manage time and assignments are interconnected to the preferences, attitudes, and performance of students using online distance learning.

The first question of this series asked if they can prioritize their responsibilities, 91.9% agreed they can prioritize the responsibilities, 1.6% were neutral, and only 0.2% disagreed. The second question asked if they were a good time manager, 82.9% agreed they were a good time manager, 9.3% were neutral, and 1.6% did not feel like they could manage their time well. The third question asked if they felt they were a procrastinator, 19.5% felt like they were a procrastinator, 22.8% were neutral, and 51.4% did not feel like they were a procrastinator. The fourth question asked if they were self-disciplined when it comes to learning, 78.2% agreed they were self-disciplined when it came to learning, 12.7% were neutral, and 2.2% did not feel like they were self-disciplined when it came to learning. The fifth question asked if they often leave tasks unfinished, 2.8% agreed they often leave tasks unfinished, 12.5% were neutral, and 77.2% disagreed with the statement. The sixth question asked if the frequently waited until the last minute to work on assignments related to training, 12.5% agreed, 17.5% were neutral, and 74.8% disagreed with the statement. The seventh question asked if they sometimes needed reminders of assignment due dates, 33.6% agreed they occasionally needed reminders of the due date, 13.7% were neutral, and 44.8% disagreed they needed occasional reminders. The final question asked if they occasionally needed incentives or rewards to motivate them to complete tasks timely, 8.5% agreed occasional motivation to complete tasks, 18.1% were neutral. However, 90.4% did not feel they needed the motivation to complete tasks. The high percentage of participants who felt like they did not need the motivation to complete a task is consistent with law enforcement culture. Officers age given a task or call for service by a dispatcher. The officer must complete the task and respond to the dispatcher when the task is completed and respond as to how the assignment was completed, known as a disposition code. Figure 19 presents the responses received from these eight questions.

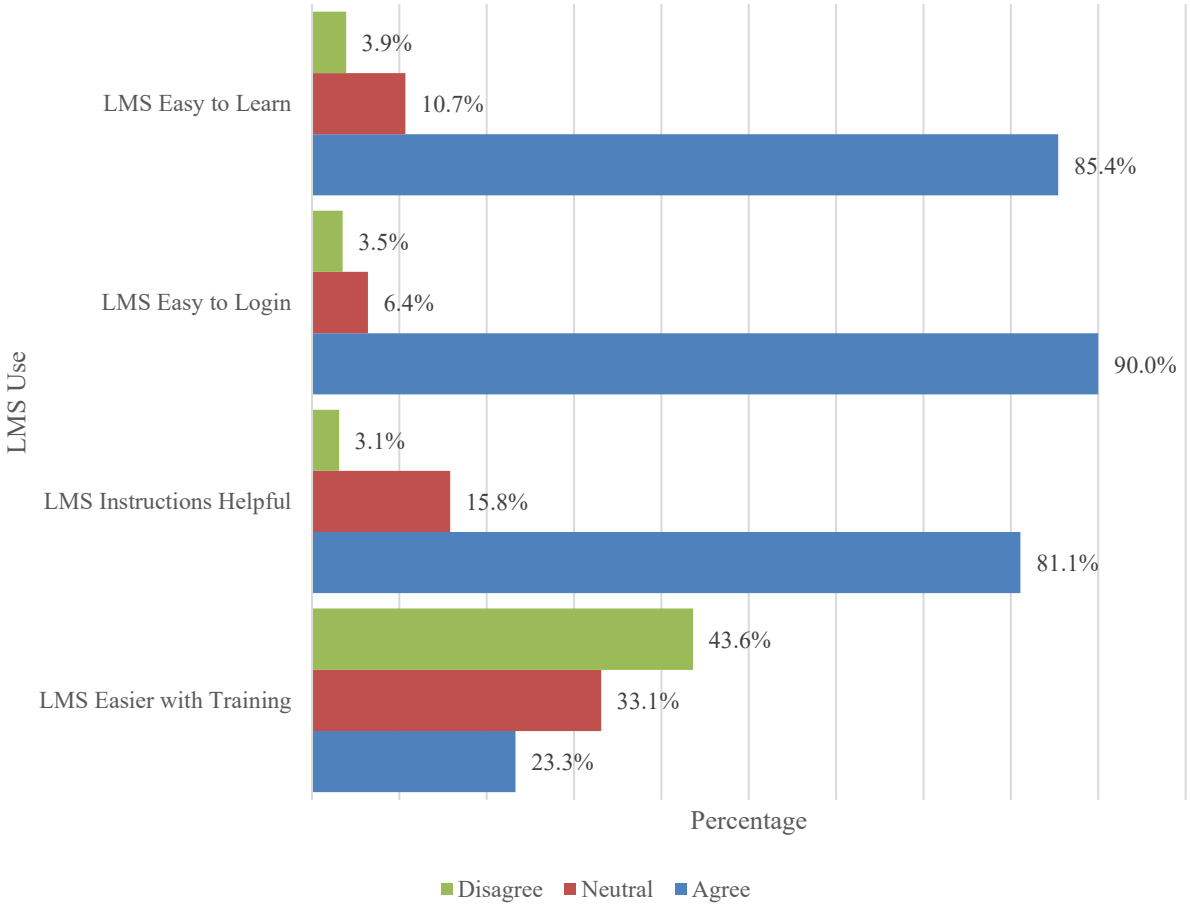


Ease of Use – Learning Management Systems

The next series of questions were related to the ease of use of their respective learning management system. Table B14 – Ease of Use – Learning Management System, in Appendix B, provides basic statistics of mean, median, and mode for the responses received. When asked if they found the Learning Management System (LMS) easy to learn, 83.7% agreed their LMS was easy to learn, with 10.5% who were neutral, and 3.8% who disagreed. When asked if they found the LMS easy to access, 87.7% agreed, 6.3% were neutral, with 3.4% who disagreed. When

asked if they felt the instructions provided for the use of the LMS were useful, 77.9% agreed, 15.1% were neutral, with 3.0% felt additional instruction was needed. When asked if they felt the LMS would be easier to use if they had received classroom training and practice, 22.2% felt classroom training and practice would have improved the ease of use, 31.7% were neutral, and 41.8% did feel additional training and practice was necessary. Figure 20 graphically illustrates the responses to the ease questions.

Figure 20 - Ease of Use - LMS



Learning Preference

The final group of questions was related to learning preference. Table B15 – Learning Preferences in Appendix B, provides the mean, median, mode, standard deviation, and variance for each of the questions. Figure 21 below presents a graphical representation of the responses to the five questions.

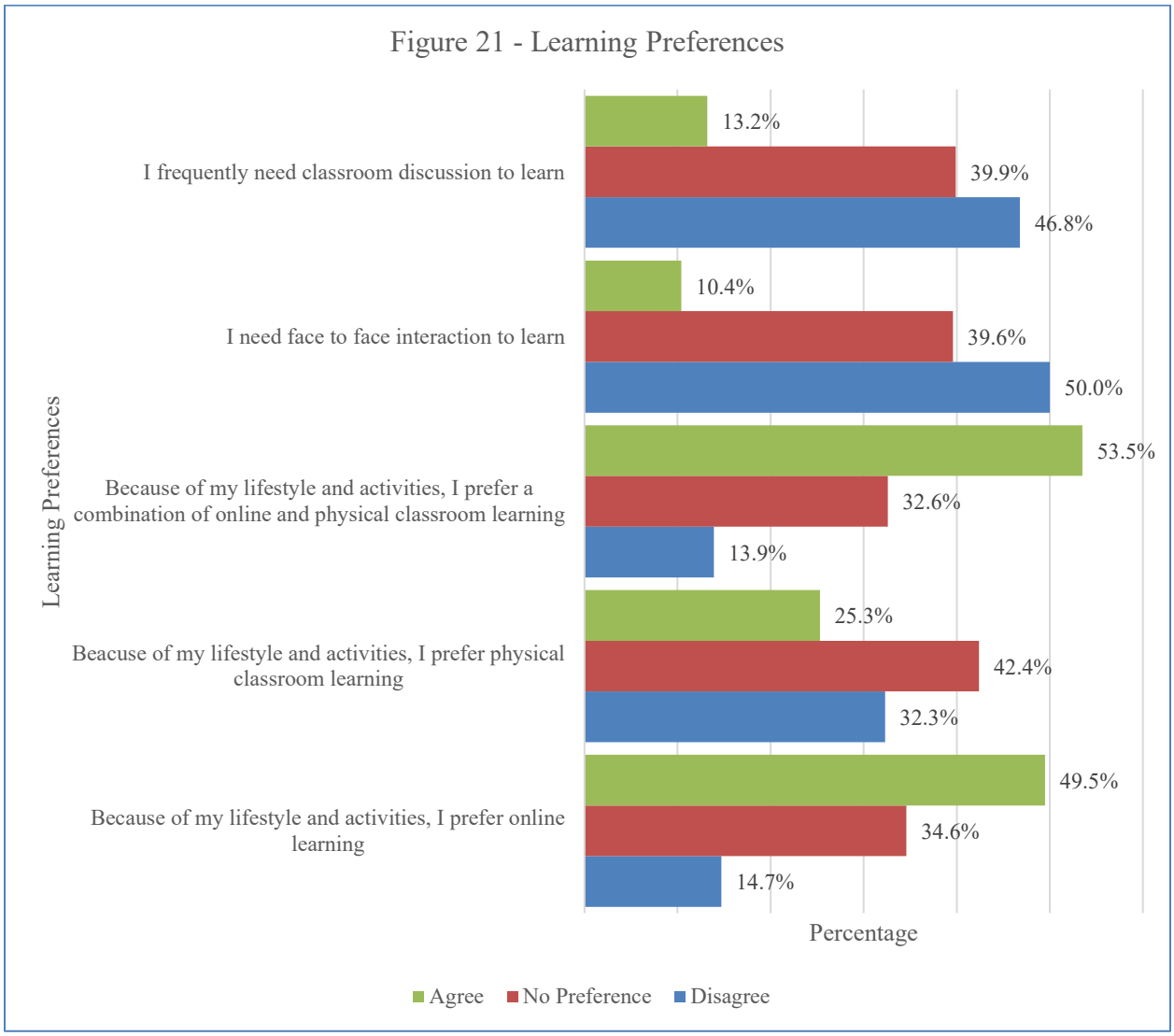
Question one stated, because of my lifestyle and activities, I prefer online learning. 49.5% of the participants agreed with the statement, 34.6% had no preference, and 14.7% disagreed with the statement.

Question two stated, because of my lifestyle and activities, I prefer physical classroom learning, 25.3% of the participants agreed with the statement and 42.4% had no preference, and 32.3% disagreed with the statement.

Question three stated, because of my lifestyle and activities, I prefer a combination of online and physical classroom learning, also known as blended learning. 53.5% of the participants preferred blended learning, 32.6% had no preference, and 13.9% disagreed with the statement.

Question four asked the respondent if they felt like they needed face to face interaction to learn. 10.4% felt they needed face to face interaction to learn while 39.6% did not have a preference, and 50.0% disagreed with the need for face to face interaction to learn.

Question five asked the respondent if they needed classroom discussion to learn. 13.2% felt they needed classroom discussion to learn, while 39.9% had no preference, and 46.8% disagreed with the statement.



Research Questions and Hypotheses

The primary research question that is being addressed is: what are the factors that influence the experiences, perception, and attitudes of Florida state law enforcement personnel related to online professional development training and education? To answer this research question, the following five questions must be addressed:

1. Does connectivity influence the officer's perception of online distance learning for the professional development of state law enforcement officers?

2. Does online, traditional classroom, or blended learning influence the officer's perception of online distance-learning for professional development of state law enforcement officers?
3. Does age, race or national origin, sex, or years of experience influence the officer's perception of online distance-learning for professional development?
4. Does the level of education and training influence the officer's perception of online distance learning for professional development?
5. Does duty assignment influence the officer's perception of online distance learning for professional development?

Research Analysis Hypothesis One

H_1 – There is no statistically significant difference in the influence of connectivity on the perception of online distance learning for the professional development of Florida state law enforcement officers.

A one-way between subjects ANOVA was conducted to compare the effect of online learning on connectivity at the $p<.05$ level for the three conditions [$F(2,429) = 0.698$, $p = .498$]. A second one-way between subjects ANOVA was conducted to compare the effect of classroom learning on connectivity at the $p<.05$ level for the three conditions [$F(2,428) = 0.588$, $p = .556$]. A third one-way between subjects ANOVA was conducted to compare the effect of blending learning on connectivity at the $p<.05$ level for the three conditions [$F(2,427) = 0.042$, $p = .959$]. Collectively, the results suggest connectivity variations between metropolitan and rural counties does not influence the perception or attitude of law enforcement personnel employed by the Florida Fish and Wildlife Commission or the Florida Highway Patrol on the use of their respective learning management system

The null hypothesis is accepted.

Research Analysis Hypothesis Two

H_2 - There is no statistically significant difference between classroom, online, and blended learning that affects the perception of online distance learning for the professional development of Florida state law enforcement officers.

A one-way between subjects ANOVA was conducted to compare the effect of online learning on use of online learning management system for professional development at the $p<.05$ level for the three conditions [$F(2,453) = 33.8$, $p = < .001$]. A second one-way between subjects ANOVA was conducted to compare the effect of classroom learning on the use of an online learning management system for professional development at the $p<.05$ level for the three conditions [$F(2,452) = 27.9$, $p = < .001$]. A third one-way between subjects ANOVA was conducted to compare the effect of blending learning on the use of online learning management system for professional development at the $p<.05$ level for the three conditions [$F(2,451) = 7.5$, $p = .001$]. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the disagree condition (M = 3.21, SD = .918) did not significantly differ from the neutral condition (M = 3.51, SD = .887) and did not significantly differ from the agree condition (M = 4.00, SD = .709). These results suggest that an online learning management system does not influence their perception of online, classroom or blended learning for the professional development for Florida state law enforcement officers.

The null hypothesis is accepted.

Research Analysis Hypothesis Three – Age, Race, Sex, Years of Experience

H_3 – There is no statistically significant difference between age, race or national origin, sex, or years of experience that affects the perception of online distance learning for the professional development of Florida state law enforcement officers.

A one-way between subjects ANOVA was conducted to compare the effect of age on use of online learning management system for professional development at the $p<.05$ level for the three conditions [$F(6,466) = 1.38$, $p = < .221$]. An additional one-way between subjects ANOVA was conducted to compare the effect of race on use of online learning management system for professional development at the $p<.05$ level for the three conditions [$F(5,467) = 1.10$, $p = < .360$]. A third one-way between subjects ANOVA was conducted to compare the effect of sex on use of online learning management system for professional development at the $p<.05$ level for the three conditions [$F(2,470) = 3.13$, $p = < .044$]. A fourth one-way between subjects ANOVA was conducted to compare the effect of years of experience on the use of online learning management system for professional development at the $p<.05$ level for the three conditions [$F(10,427) = 0.63$, $p = < .785$].

These results suggest that age, race, sex, or years of experience of the user does not influence the use of an online learning management system used by the employees of the Florida Fish and Wildlife Commission and Florida Highway Patrol for professional development learning.

The null hypothesis is accepted.

Research Hypothesis Four – Level of Education, Instructor

H_4 – There is no statistically significant difference between the level of education and training or being a certified Criminal Justice Standards Training Commission instructor on the

perception of online distance learning for the professional development of Florida state law enforcement officers.

A one-way between subjects ANOVA was conducted to compare the effect of formal education on the use of online learning management system for professional development at the $p<.05$ level for the three conditions [$F(6,466) = 1.13$, $p = < .338$]. An additional one-way between subjects ANOVA was conducted to compare the effect of a certified Criminal Justice Standards Training Commission (CJSTC) instructor and non-instructor on the use of online learning management system for professional development of state law enforcement personnel. There was a significant effect on the perception of online learning management system for professional development of state law enforcement officers at the $p<.05$ level for the three conditions [$F(2,470) = 6.66$, $p = < .001$]. Post hoc comparison using the Tukey HSD test indicated that the mean score for the CJSTC instructor condition ($M = 3.59$, $SD = 0.93$) did not significantly differ from the non-instructor condition ($M = 3.85$, $SD = 0.75$)

These results suggest that the level of education does not influence the attitude or perception of FHP and FWC personnel on the use of an online distance learning management system for professional development learning. However, the results do suggest that being a CJSTC instructor does influence the attitude and perception of FHP and FWC positively toward the use of an online distance learning management system for professional development learning.

The null hypothesis was accepted for the condition of the level of education. The null hypothesis was rejected for the condition of certified CJSTC instructor.

Research Hypothesis Five – Duty Assignment

H_5 – There is no statistically significant difference between the duty assignment on the perception of online distance learning for the professional development of Florida state law enforcement officers.

A one-way between subjects ANOVA was conducted to compare the effect of duty assignment on the use of an online learning management system for professional development. There was not a significant effect on the perception on the duty assignment on the use of online learning for professional development at the $p<.05$ level for the three conditions [$F(3,469) = 1.13$, $p = < .333$]. These results suggest that duty assignment does not influence the attitude or perception of FHP or FWC personnel on the use of an online distance learning management system for professional development learning.

The null hypothesis was accepted.

Summary

This chapter provided a statistical analysis of the data collected to answer the primary research question, what are the factors that influence the experiences, perception, and attitudes of Florida state law enforcement personnel employed by the Florida Fish and Wildlife Commission and the Florida Highway Patrol related to online professional development training. To answer the primary research question, a series of sub-questions were asked. First, does connectivity influence the attitude and perception of state law enforcement officers on the use of an online distance learning management system? Second, does online, traditional classroom or blended learning styles influence the attitude and perception of state law enforcement officers on the use of an online distance learning management system? Third, does age, race or national origin, sex, or years of experience influence the attitude and perception of state law enforcement officers on

the use of an online distance learning management system? Fourth, does the level of education and training or being a certified Criminal Justice Standards Training Commission instructor influence the attitude and perception of state law enforcement officers on the use of an online learning management system for professional development learning? The fifth question asked if the officer's duty assignment influence the attitude and perception of state law enforcement officers on the use of an online learning management system for professional development learning?

A survey was sent to approximately 2,750 state law enforcement officers and troopers employed by the Florida Fish and Wildlife Commission and the Florida Highway Patrol which represents approximately 67% of the total number of state law enforcement officers in Florida. Approximately 18% of the invited participants completed the survey. The survey participants represented 61 of the 67 counties in Florida. Baker, Bradford, Clay, DeSoto, Glades, and Hardee Counties did not have participants complete the survey. The minimum years of experience were less than one year to 47 years of service. The median years of service were 17, and the mode was nine.

All hypotheses were tested using a one way between subjects ANOVA to compare the effects of the dependent and independent variable.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter begins with a summary of the previous four chapters. After the summary, an overall discussion of the chapter was presented that emphasized the essential aspects of this study. The chapter also provides an overview of the findings to the primary and secondary research questions, along with researcher conclusions derived from the findings in Chapter 4. Included in this chapter is a discussion of the implications of this study, the recommendations for additional research and action along with the limitations of the study.

Summary of the Study

The purpose of this quantitative study was to examine perceptions of state of Florida law enforcement officers employed by the Florida Highway Patrol and Florida Fish and Wildlife Commission on the use of online or distance learning for professional development. Much of the information on law enforcement training and education is derived from analysis of metropolitan police agencies along with community and state colleges that provide law enforcement education and training (Johnson, 2010). Little research has been conducted on the use of distance-learning technology and applications for the in-service or professional development of law enforcement personnel across the country. Distance-learning used for professional development training and education of law enforcement has been implemented to address budget deficits, staffing shortages, and for convenience without consideration of the effectiveness, efficiency, or learning comprehension (International Association of Chiefs of Police).

An issue that law enforcement agencies and law enforcement training centers have is they have failed to utilize or embrace distance-learning technologies, or they have adopted distance-learning technology without knowing the effectiveness of the training or learning. For adult learning to be active and ultimately effective, the learner must be engaged in the learning. The attitude and perception of the learner directly influence the engagement of the learner. The law enforcement profession has historically used traditional classroom lectures for education and hands-on demonstration for training. Students are provided instructional information; they are then required to demonstrate understanding through examinations or through practical applications with a designated trainer or instructor to ensure proficiency (Johnson, 2010). The current distance-learning used by law enforcement agencies and training centers involves a one-way transfer of information without the oversight of an instructor or trainer. Law enforcement agencies and training centers should review the use of distance-learning technologies to determine which distance-learning programs and applications provide effective and efficient learning for their law enforcement personnel.

The primary purpose of this study was to determine the factors that influence the experiences, perception, and attitudes on the use of distance learning technology for the delivery of education and training to state law enforcement personnel.

The secondary purpose of this study is to contribute to the overall knowledge regarding the use of distance-learning technology in the workplace for education and training. The information revealed during this research is applicable across a broad spectrum of industries and applications including training and education of public and private sector personnel.

This study was specifically designed to address the training issues of state law enforcement agencies who have personnel dispersed across 66,000 square miles of land and

coastal waters of Florida. Local law enforcement agencies do not have the problems associated with the geographical separation of personnel that are shared by state law enforcement agencies.

The primary research question being addressed is what are the factors that influence the experiences, perception, and attitudes of Florida state law enforcement personnel related to online professional development training and education? The following five secondary questions were also asked. First, does connectivity influence the attitude and perception of state law enforcement officers on the use of an online distance learning management system? Second, does online, traditional classroom or blended learning styles influence the attitude and perception of state law enforcement officers on the use of an online distance learning management system? Third, does age, race or national origin, sex, or years of experience influence the attitude and perception of state law enforcement officers on the use of an online distance learning management system? Fourth, does the level of education and training or being a certified Criminal Justice Standards Training Commission instructor influence the attitude and perception of state law enforcement officers on the use of an online learning management system for professional development learning? The fifth question asked if the officer's duty assignment influence the attitude and perception of state law enforcement officers on the use of an online learning management system for professional development learning?

To address these questions a series of 64 survey questions were developed from previous research conducted by Donavant and the *Test of Online Learning Success* also known as *TOOLS*, developed by Kerr, Rynearson & Kerr. Additional questions were developed from the *Technology Use and Perceptions Survey* which is also known as TUPS that is part of ongoing research being conducted by the College of Education at the University of South Florida. An online survey was conducted using Qualtrics hosted by the University of North Florida.

Qualtrics is a simple to use, but powerful online survey tool used to conduct online survey research, analysis responses, and other data collection activities. The survey was launched on April 15, 2018, to 2,750 state law enforcement officers located in the state of Florida and employed by the Florida Highway Patrol and the Florida Fish and Wildlife Commission. The survey concluded on April 30, 2018, with 496 responses received for a response rate of 18%.

The survey questions were divided into groups to gather specific types of information. Questions were designed to gather user perspective and attitude on agency-specific learning management programs. The survey consisted of 64 questions that were analyzed and results into categories of descriptive demographics, work-related, reading and writing skills, technology use, software use, self-belief, self-management, ease of use, and learning preference for a review of factors that influence the attitudes and perceptions of state law law enforcement personnel on the use of learning management systems for profession development learning

Note that all the survey participants are provided a ruggedized laptop constructed with heavy-duty, durable components designed to take extreme temperatures, extended battery life, specially designed to be used in vehicles and other extreme weather conditions with wireless connectivity to their vehicles which most consider their primary workspace. The vehicles are also equipped with docking stands to mount the computers for the convenient use of the laptop, along with mounted printers.

The descriptive or demographic questions were age, race or national origin, years of experience as a law enforcement officer, sex, and native language. Seventy-five percent of the participants were between the age of 28 and 57 years of age. Seventy-four percent reported their race as White or Anglo-American, 7.5% reported themselves as Hispanic or Latin, followed by 3.8% who considered themselves as Black or African American, with 1.4% considering

themselves as Native American or Asian with the remaining 2% considering their race, ethnicity or national origin as other. The years of experience varied from less than one year to 47 years of experience with the median years of experience is 17, and the mode was 9. Seventy-seven percent of the participants were male, 7.3% were females, and the remaining did not disclose their sex. Eight-two percent stated their native language was English with 3.8% indicating Spanish was their native language.

Five questions were classified as work-related questions. The first of the questions asked the participant if they felt their online learning management system provided the knowledge to do their job. The learning management system question was significant in the survey analysis and became a primary variable in much of the detailed analysis. Other questions asked about being a CJSTC instructor, their duty assignment, level of education and their county of assignment. All state law enforcement officers are assigned to a specific county. Their county of assignment was used during the analysis to determine if they were urban user or rural user.

Eight questions related to the participant's ability to read and write. The users reported their perception of their ability to read, write, comprehend, follow instructions, convey ideas in writing, and how many books they had read in the previous year. When asked if they felt they were a good reader, 94% responded they were a good reader with 6% responding they were not a good reader. When asked if they felt they read carefully, 96% responded they read carefully with only 4% who responded they did not read carefully. When asked if they were capable of following written instructions, again 96% felt they were capable of following written instruction with only 4% stating they had difficulty following written instructions. When the statements “I sometimes require help to understand written instructions” and “I sometimes have trouble comprehending what I read,” 78% of the participants disagreed with the first statement, and 64%

disagreed with the second statement. Two questions were related to their perceived ability to write. When asked if they were a good writer, 92% felt they were a good writer with only 8% indicating they did not feel they were good writers. When asked if they were capable of conveying their ideas in writing, 96% felt like they could convey their ideas in writing with 4% stating they did not feel they were good at conveying ideas in writing. The findings were not surprising given that a significant amount of a state law enforcement officer's daily activities is committed to reading reports, information, laws and procedures, along with writing reports and other documents. However, the survey was not able to quantify their ability to read and write.

There was six question related to their use of Microsoft Excel, a web browser such as Internet Explorer, Outlook, and Word, along with the Apple operating system. It was not surprising to learn most of the users felt comfortable with the use of Word and Outlook considering most participants use the software daily. Participants were far less comfortable with the use of Excel and the Windows operating system. Sixty percent of participants felt comfortable using Excel and 54% were comfortable with the knowledge and skill using Microsoft Windows operating system. Less than 25% of the participants felt comfortable with the use of the Apple operating system.

A large part of the survey was devoted to collecting information from the participants on their use and skill level using technology. Technology plays a central part in the perception and attitude of personnel using a learning management system for distance learning. A total of 14 questions were asked about their use of technology. The first six questions asked about their abilities to use a computer or other technology, such as sending email, attaching files to an email message, managing files on a computer, ability to copy and paste, use of an online discussion board, and their use of social media. Ninety-four percent stated they were very comfortable with

sending an email and attaching files to an email message. When asked about managing files on a computer and their ability to copy and paste text, 92% stated they could manage files on a computer along with copying and pasting text. When asked about using the online discussion board, 85% felt they could successfully use an online discussion board. Eighty percent of the participants felt they were comfortable using social media. The next eight technology questions were related to their current training and use of technology to do their job. When asked if they felt additional training would increase their use of technology, 91% felt additional training would increase their use of technology. As a follow up to the previous question, the participants were asked if they had adequate training in the use. Seventy-nine percent felt they had adequate technology training. When asked if they felt they were prepared to use technology in their job, 95% felt like they were prepared. A question asked the participants how they obtained most of their information about current news events. Forty-seven percent used technology to obtain their news, 36% gathered their information from radio or television, and the remaining 17% used a non-technology approach for gathering news information such as reading a newspaper or talking to other people. Four questions were designed to gather insight into the number of hours they used technology each week. The participants were asked approximately how many hours per week they use the computer at work, at home, and how many hours did they surf the Internet. The final technology use question asked how many hours they play video games each week. Seventy-four percent of the participants reported they used their computer at work more than 20 hours each week. In comparison, only 17% of the participants reported using their home computer for more than 20 hours per week.

When asked how many hours they surfed the Internet, 16% surfed 11 or more hours, 59% surfed the Internet one to five hours, and 14% stated they surfed the Internet less than one hour

each week. When asked how many hours the participants played video games, 74% reported less than one hour, 9% report one to five hours, and 6% reported playing six or more hours each week.

Nine questions were categorized as self-belief questions. These survey questions asked the participant if they felt they had the ability to learn new technology, balance many tasks at once, were they goal oriented, did they have critical thinking skills, did they have the capability to work independently, were they self-directed in their learning, did they have the capability to solve problems along, would they ask for help when they had a problem, and were they capable of learning new skills. When asked if they were capable of learning new technologies only 2% felt like they were not capable of learning new technologies. When asked if they could balance many tasks at one time on 3% felt they could not balance many tasks at one time. When asked in the felt like they were goal oriented and capable of critical thinking only 0.2% disagreed with the statement. When asked if they were capable of working independently only 1.6% of the participants felt they could not work independently. When asked if they were self-directed in their learning on 2.8% felt they were not capable of working independently. When asked about their capability of solving problems alone, 5.6% felt they could not solve the problem alone. When asked about asking if they would ask for help when they had a problem 9.5% felt they would not ask for assistance. When asked if they were comfortable with learning new skills, only 0.2% felt they could not learn new skills. In general, the participants were very confident in their self-belief of the abilities.

There were eight survey questions that related to self-management. The questions asked were:

- I am capable of prioritizing my responsibilities

- I am a good time manager
- I am a procrastinator
- I am self-disciplined when it comes to learning
- I often leave tasks unfinished
- I frequently wait until the last minute to work on assignments related to learning
- I sometimes need reminders of assignment due dates
- I sometimes need incentive or rewards to motivate me to complete tasks timely

Ninety-two percent of the participants felt they were capable of prioritizing their responsibilities. Eighty-three percent felt like they are a good time manager. Twenty percent felt they were a procrastinator. Seventy-eight percent felt they were self-disciplined when it comes to learning. Three percent often leave tasks unfinished. Thirteen percent frequently waited until the last minute to work on assignments related to learning. Thirty-four percent agreed they sometimes need reminders of assignment due dates. Nine percent agreed they sometimes need incentive or rewards to motivate them to complete tasks timely. Again the participants were very confident in self-management abilities.

Four questions were related to the ease of use of their learning management system:

- I found our online learning program easy to learn
- I found it easy to log onto our online learning program
- I found the instructions to be very useful in helping me work within the online learning system
- I feel the online learning program would be easier to use if I had received classroom training and practice

Only 4% of the participants for their online was difficult to learn and use. Three percent found their online learning program difficult to log onto and instruction with practice would help them to work

within the online learning management system. When asked if they felt the online learning program would be easier to use if I had received classroom training and practice, 42% disagreed with the statement. Participants felt like it was easy to log in, learn, and use their online learning management system.

The last group of questions was categorized as learning preference questions. When asked, because of my lifestyle and activities, I prefer online learning, 50% preferred online learning, 35% had no preference, and 15% disagreed. When asked, because of my lifestyle and activities, I prefer physical classroom learning, 26% preferred classroom learning, 42% had no preference, and 32% disagreed. When asked, because of my lifestyle and activities, I prefer a combination of online and physical classroom learning, 53% preferred blending learning, 33% had no preference, and 14% disagreed. When asked, I need face to face interaction to learn, 50% disagreed, 40% had no preference, and 10% disagreed. When asked, I frequently need classroom discussion to learn, 47% disagreed, 40% had no preference, and 13% disagreed with the statement. The responses and analysis of these questions are consistent with prior literature where student are more likely to prefer online learning when the choice is related to their activities.

The research revealed nearly 75% of all participants were between the age of 28 and 57 years of age and nearly 65% of the participants had between 6 and 25 years of experience. As noted in the literature, law enforcement is a high-stress, high-liability occupation with a high mortality rate. State law enforcement officers are part of the Florida Retirement System (FRS) are classified as Special Risk employees, making them eligible for full retirement benefits at 25-years of service regardless of age. For those employees who take the option for a traditionally defined benefit pension retirement, the state of Florida also has a Deferred Retirement Option Program (DROP) that allows a person in the FRS to retire and continue to work for an additional 5-years but must terminate employment at the end of the fifth year. It is for this reason that only 42 participants were between the age of 58 and 67 and only seven participants 68+. State law

enforcement personnel who are not part of the defined benefit pension plan are part of the retirement option known as the Investment or IP plan. The state of Florida contributes a fixed percentage into the employee investment plan. The two retirement plans explain why only 35 participants had more than 30 years of experience.

Florida's population was estimated to be 77% white, 45% male 26% Hispanic as of July 1, 2017 (U.S. Census Bureau). In comparison, 74% of the survey participants were white, 77% were male and 8% Hispanic or Latin

Limitations of the Study

The study was limited to sworn law enforcement officers employed by the state of Florida who has statewide law enforcement jurisdiction. Sworn law enforcement personnel assigned to the Florida Highway Patrol and Florida Fish and Wildlife Conservation Commission do not report to a fixed location for a pre or post-shift briefing, they instead rely on wireless connectivity to access most intelligence and law enforcement information. As with most studies, this research project had limitations. While there are many advantages to using an online survey instrument, such as speed, and availability, there are also problems such as technical difficulties and misunderstandings of the questions asked.

A substantial limitation was the researcher's failure to include a question on the survey to capture the agency of the participant. The oversight further limited the researcher's ability to compare the influence of different learning management systems and their influence, perception, and attitude of state law enforcement personnel on the use of LMS for professional development. An additional limitation, while not significant, but still limiting, was the inability to quantify some of the survey results. For instance, participants were asked their ability to read, write, manage computer files, and use other technology. However, as a researcher, is saving all your

documents to the desktop managing the files on your computer? Another limitation to quantify responses was the question asking the participants how many hours they surfed the Internet.

The survey population compared to the population of the state of Florida was another observed limitation. The U.S. Census Bureau estimated the race demographics of Florida in July 2017 to be 77.4% White, 16.9% Black, 3.4% Native American or Asian, 25.6% Hispanic or Latina American. The survey population of 74% White is close to the estimated Florida population, but the 3.8% Black survey population is 13.1% lower than the estimated Florida Black population of 16.9%. The Hispanic or Latina American survey population is also 18.1% lower than the estimated Florida Hispanic or Latina American population of 25.6%.

The duty assignment survey population is also skewed compared to the actual duty assignment population. The expected patrol population is approximately 70%. The lower patrol survey population compared to the higher than expected investigations population is attributed to the availability of time by investigative personnel to respond to the survey.

Limitations – Survey Format

Self-selection bias is another major limitation of online survey research (Stanton, 1998; Thompson et al., 2003; Wittmer et al., 1999). In any given Internet community, there are undoubtedly some individuals who are more likely than others to complete an online survey. These sampling issues inhibit researchers'' ability to generalize study findings and limit the researcher's ability to estimate population parameters, which presents the greatest threat to conducting probability research. The survey also did not specify if they were surfing the Internet at home or while at work. Another limitation noted by the researcher was the tendency for participants to select responses that appear socially desirable even though their responses are anonymous. Participants reported their self-views in many of the questions. Mullane &

Williams (2013), acknowledge self-reporting data is skewed toward the norms of society for a variety of reasons, including ignorance and social norms. The final limitation noted by the researcher is the uniqueness of classroom learning for state law enforcement personnel and their personal bias. A large portion of classroom learning for professional development is centrally located at the FHP and FWC training academy located approximately 15 miles west of Tallahassee. For most state law enforcement personnel, this requires them to travel long distances with multiple overnight stays away from their family. The survey was not designed or able to capture the bias generated by these events.

Response bias covers a wide range of inclinations for participants to respond erroneously to questions. These biases are predominant in research involving participants who self-report, such as a structured interview or surveys. Response biases can significantly impact the validity of questionnaires or surveys.

Many factors can cause response bias, all relating to the idea that human subjects do not respond the same way to the same stimuli, but instead actively integrate multiple sources of information to generate a response in a given situation. Because of different life experiences, almost all experimental conditions have a potential for a bias response. A typical bias may include the phrasing of the questions in the survey or the demeanor of the researcher. Respondents are subliminally induced to provide socially desirable responses that may affect survey results. Surveys can continue to maintain a high level of reliability that may lull the researches into a false sense of security about the conclusion drawn from the research. Because of response bias issues, it is possible that some study results are inaccurate. It is important for the researcher to be cognizant of response bias and the potential to negatively affect research findings

Research Study Questions

The primary research question is what are the factors that influence the experiences, perception, and attitudes of Florida state law enforcement personnel related to online professional development training and education? Five sub-questions were developed to address the primary research question.

The first sub-question asks, does connectivity influence the officer's perception of online distance learning for the professional development of state law enforcement officers? A one-way between subjects ANOVA was conducted to compare the effect of online learning on connectivity to the learning management system. A second one-way between subjects ANOVA was conducted to compare the effect of classroom learning on connectivity to the learning management system. A third one-way between subjects ANOVA was conducted to compare the effect of blending learning on connectivity to the learning management system. All three test was determined to be not statistically significant difference. Collectively, the results suggest connectivity variations between metropolitan and rural counties does not influence the perception or attitude of law enforcement personnel employed by the Florida Fish and Wildlife Commission or the Florida Highway Patrol on the use of their respective learning management system.

The second sub-question asked does online, traditional classroom, or blended learning influence the officer's perception of online distance-learning for professional development of state law enforcement officers? A one-way between subjects ANOVA was conducted to compare the effect of online learning on use of online learning management system for professional development of state law enforcement officers. A second one-way between subjects ANOVA was conducted to compare the effect of classroom learning on the use of an online

learning management system for professional development of state law enforcement officers. A third one-way between subjects ANOVA was conducted to compare the effect of blending learning on the use of online learning management system for professional development of state law enforcement officers. All three test resulted in statistically significant differences. These results suggest that an online learning management system does not influence their perception of online, classroom or blended learning for the professional development for Florida state law enforcement officers. Lifestyle and personal life events are the strongest predictors of learning style preference which was supported during the literature review.

The third sub-question asked if age, race or national origin, sex, or years of experience influence the officer's perception of online distance-learning for professional development? A one-way between subjects ANOVA was conducted to compare the effect of age on use of online learning management system for professional development of state law enforcement officers. An additional one-way between subjects ANOVA was conducted to compare the effect of race on use of online learning management system for professional development of state law enforcement officers. A third one-way between subjects ANOVA was conducted to compare the effect of sex on use of online learning management system for professional development of state law enforcement officers. A fourth one-way between subjects ANOVA was conducted to compare the effect of years of experience on the use of online learning management system for professional development of state law enforcement officers. All four test were determined not to be statistically significantly different. These results suggest that age, race, sex, or years of experience of the user does not influence the use of an online learning management system used by the employees of the Florida Fish and Wildlife Commission and Florida Highway Patrol for professional development learning.

The fourth sub-question asked does the level of education and training or being a CJSTC instructor influence the officer's perception of online distance learning for professional development? A one-way between subjects ANOVA was conducted to compare the effect of formal education on the use of online learning management system for professional development of state law enforcement personnel. An additional one-way between subjects ANOVA was conducted to compare the effect of a certified Criminal Justice Standards Training Commission (CJSTC) instructor and non-instructor on the use of online learning management system for professional development of state law enforcement personnel. There was a significant effect on the perception of online learning management system for professional development of state law enforcement officers when compared to personnel who are CJSTC instructors. These results suggest that the level of education does not influence the attitude or perception of FHP and FWC personnel on the use of an online distance learning management system for professional development learning. However, the results do suggest that being a CJSTC instructor does influence the attitude and perception of FHP and FWC positively toward the use of an online distance learning management system for professional development learning. This finding surprised the researcher as it was expected CJSTC instructors would prefer classroom learning based on their training as an instructor. The FDLE instructor training class only provides training and instructional examples for traditional classroom training.

The fifth sub-question asked does duty assignment influence the officer's perception of online distance learning for professional development? A one-way between subjects ANOVA was conducted to compare the effect of duty assignment on the use of an online learning management system for professional development of state law enforcement officers. There was not a significant effect on the perception of the duty assignment on the use of online learning for

professional development for state law enforcement officers. These results suggest that duty assignment does not influence the attitude or perception of FHP or FWC personnel on the use of an online distance learning management system for professional development learning.

The literature review and the findings of this research are very consistent. Donavant (2007), discovered

> no statistically significant relationship between potential online learning success by police officers and the individual variable of gender, race, age of the adult learner, number of years of police service and previous exposure to DL (distance learning) delivery methods, the level of formal education is statically significantly associated with the potential success of police officers participating via DL.

Donavant also discovered "The majority of participants chose TI (Traditional Instruction) as their preferred delivery method, citing familiarity with TI and the lack of face-to-face interaction when participating via DL."

Conclusions

The findings in this study provided a glimpse into the attitudes, influences, and perceptions of state law enforcement officers and troopers assigned to the Florida Highway Patrol and the Florida Fish and Wildlife Commission on the use of online distance learning management system for professional development.

Implications

The wireless connectivity and bandwidth are very different between the rural counties and the metropolitan areas of the state. The researcher expected significant differences in the perception of the learning management system based on the connectivity. The lack of difference is good news to the agencies. The Florida Highway Patrol and Florida Fish and Wildlife

Commission do not need to invest additional financial resources in purchasing higher speed or higher quality data plans for continued satisfaction of personnel in the use of their learning management system.

The research also revealed the online learning management system does not influence state law enforcement personnel perception of online, classroom or blended learning. Literature supports and does this research to learning style preference is closely related to lifestyle issues. Some professional development classes may be more effective if taught in a particular learning style. The law enforcement agencies can select the learning style that is the most efficient and effective for their operation without negatively impacting the perception of their respective learning management system. The previous literature and this research does support and demonstrate that state law enforcement agencies can use distance learning management systems for the successful delivery of professional development learning.

The research also revealed no statistical difference in the influence, attitude, or perception of the use of a learning management system as it related to age, race, sex or years of experience. The issues are fundamental to the agencies as the issues of age, race, and sex are directly related to protections afforded employees under the Fourteenth Amendment of the United States Constitution.

It is also welcomed news to the agencies that level of education does not influence the attitude or perception of state law enforcement personnel on the use of online distance learning management system. All personnel regardless of the level of education can use the learning management system for professional development with equal learning performance.

The research revealed the duty assignment of personnel does not influence the perception or attitude toward the use of the online distance learning management system. Each agency has

personnel in many different roles and responsibilities. It is important for each state law enforcement agency to know that all personnel is receiving equal training using their learning management system.

While not explicitly part of this research, gaps in knowledge and skill were revealed in the use of technology during the research. Agency personnel could benefit from training in the use of technology and software.

Recommendations for Future Research

The purpose of this study was to determine the factors that influence the experiences, perception, and attitudes of the use of distance learning technology for the delivery of education and training to state law enforcement personnel for professional development training. Learning management system (LMS) vary tremendously in operational features and corresponding bandwidth requirements. PowerDMS is a very simplistic LMS that provides documents to the users, documentation of receipt to the agency, and the ability of the user to retrieve and review documents as needed. The benefit of PowerDMS is the low bandwidth requirement which is very beneficial in rural areas where 3G wireless service is prevalent. The other spectrum is LMS platforms such as Canvas and Cornerstone that provide robust features that include enhanced graphics and interactive user capabilities, but these features require higher bandwidth to take advantage of the enhanced features. As supported by the literature, adult learners must feel the learning is beneficial for meaningful learning to occur. Additional research should be conducted into the needs of the learner to determine the proper balance of enhanced graphics and interactive user capabilities that promote learning and the limitations of bandwidth. The question becomes how much should an agency spend on wireless bandwidth technology to accomplish professional development learning via wireless LMS.

Additional research should be conducted into the enhanced use of blended learning for state law enforcement professional development. Clearly the costs involved to bring all state law enforcement officers to a central location for professional development training is a significant expense. Research should be conducted into creating learning centers in each part of the state where officers would meet to conduct professional development training. The learning centers would have very high bandwidth capabilities for wired and wireless learning. Personnel in rural areas with limited connectivity would report to the learning center and connect to the high-speed wireless network to complete asynchronous learning through the LMS.

Additional research should be conducted into the use of video conferencing technology that could be installed at the remote learning center. Learners could report to multiple learning centers throughout the state for synchronous learning. The learning sessions could be recorded and make available to other learners who work alternate work schedules for an asynchronous learning session.

As professional development learning needs increase, research should be conducted into instructional design and technology. Agencies should review the professional development curriculum and classify the curriculum into new and recurring learning. New learning requires coving the topic in detail to ensure no concept is missed. However, the recurring curriculum should be created differently. Recurring learning curriculum could begin with a pre-test of key concepts. If the learner completes the pre-test with 100% accuracy, no additional training is required for the session. If the learner knows most of the concepts but struggles in a topic area, the learning management system could require detailed learning in the topic area with the learner need additional training. The savings associated with personnel not participating in non-meaningful learning is tremendous.

Chapter Summary

This final chapter summarized the purpose of this study and related literature, methodology; it discussed the survey results and statistical analysis. It provided implications and recommendations for future study. The basic knowledge required to competently perform the duties of a law enforcement officer is increasing as society expects law enforcement to perform the duties of protecting, serving, and providing additional social services. The demand for additional professional development is more complex and requires increased deliver speed to law enforcement officers with adding additional personnel resources. Online distance learning is the key to the fast, efficient, and effective delivery of professional development learning and training to our nation's law enforcement personnel.

This study found no statistical evidence to suggest that online, classroom or blended learning is more effective for learning. Donavant also found "no statistical evidence to suggest that DL (distance learning) provided a more effective delivery method for professional police development than TI (traditional instruction)" (2007, p.98). The learning style is dependent on the lifestyle of the learning and the preferred learning style of the learner. Some learners need social interaction to learn and the motivation is accompanying classroom learning while other learners are very motivated and can learn independently through an online learning style.

Appendix A

Qualtrics Survey Questions - Gaston

Start of Block: Informed Consent

Q75

Informed Consent Hello, my name is Keith Gaston, and I am a doctoral student at the University of North Florida. I am conducting a research study on the use of distance learning for in-service or professional development training in law enforcement in order to analyze the influence of technology on the professional development learning of law enforcement personnel. The purpose is to improve the effectiveness of distance learning used by law enforcement agencies. If you take part in my project, you will complete an online survey. I expect that participation in this study will take less than 15 minutes of your time. You may stop and start the survey at will. Your responses will be anonymous. Your agency will not have access to your individual responses; only the final report Only authorized research personnel will have access to your responses. Although there are no direct benefits to or compensation for taking part in this study, others may benefit from the information I learn from the results of this study. Additionally, there are no foreseeable risks for taking part in this project. Participation is voluntary, and there are no penalties for deciding not to participate, skipping questions, or withdrawing your participation. You may choose not to participate in this research without negatively impacting your relationship with your agency. If you have any questions or concerns about this project, please contact me. You may print a copy of this form for your records if you desire. If you have questions about your rights as a research participant or if you would like to contact someone about a research-related injury, please contact the chair of the UNF Institutional Review Board by calling (904) 620-2498 or emailing irb@unf.edu. Thank you for your consideration.

Keith E. Gaston Phone: Email: By consenting to participate, you are------ attesting that you are at least 18 years of age and agree to take part in this research study.

End of Block: Informed Consent

Start of Block: Course Evaluation

Q1 Overall, I found our online learning program (iLearn or PowerDMS) easy to learn.

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q2 Overall, I found it easy to log onto our online learning program (iLearn or PowerDMS).

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q3 Overall, I found the instructions to be very useful in helping me work within the online learning program

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q4 I feel the online learning program would be easier to use if I had received classroom training and practice

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q5 Overall, I feel that online learning provides the knowledge to do my job

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q69 The next series of questions is about how you learn and your learning preferences

---

Q6 I am capable of learning new technologies

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q7 I am capable of sending and receiving email

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q8 I am capable of attaching files to an email message

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q9 I am capable of managing files on a computer

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q10 I can copy and paste text using a computer

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q11 I am capable of using online discussion boards

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q12 I am capable of using online social media such as Facebook, LinkedIn, Twitter, etc.

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q13 I am capable of prioritizing my responsibilities

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q14 I am a good time manager

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q15 I am a procrastinator

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q16 I am able to balance many tasks at one time

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q17 I am goal-oriented

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q18 I am self-disciplined when it comes to learning

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q19 I am capable of critical thinking

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q20 I often leave tasks unfinished

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q21 I sometimes require help to understand written instructions

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q22 I frequently wait until the last minute to work on assignments related to learning

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q23 I sometimes have trouble comprehending what I read

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q24 I sometimes need reminders of assignment due dates

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q25 I sometimes need incentives or rewards to motivate me to complete tasks timely

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q26 Because of my lifestyle and activities, I prefer online learning

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q27 Because of my lifestyle and activities, I prefer physical classroom learning

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q28 Because of my lifestyle and activities, I prefer a combination of online and physical classroom learning

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q29
I can learn by working independently

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q30
I am self-directed in my learning

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q31
I am capable of solving problems alone

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q32
I need face to face interaction to learn

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q33
I am a good reader

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q34
I frequently need classroom discussion to learn

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q35
I generally ask for help when I have a problem

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q36
I am comfortable with learning new skills

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q37
I read carefully

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q38
I am a good writer

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q39
I am generally capable of following written instructions

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q40
I am generally capable of conveying my ideas in writing

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q41
Additional training would increase my use of technology

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q42
I have had adequate training in technology use

- Strongly Agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

Q43
I am prepared to effectively use technology in my job

- ○ Strongly Agree (1)
- ○ Agree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Disagree (4)
- ○ Strongly Disagree (5)

Q70 The next group of questions is about your knowledge and experience with computers and software use

---

X→

Q44 On a scale from 0-10, how would you rate your level of skill with Microsoft WORD or equivalent

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

X→

Q45 On a scale from 0-10, how would you rate your level of skill with Microsoft EXCEL or equivalent

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

X→

Q46 On a scale from 0-10, how would you rate your level of skill with Microsoft OUTLOOK or equivalent

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

X→

Q47 On a scale from 0-10, how would you rate your level of skill with Microsoft Windows

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

Q48 On a scale from 0-10, how would you rate your level of skill with Apple operating system

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

Q49 On a scale from 0-10, how would you rate your level of skill with Internet Explorer or equivalent web browsers

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

Q71 The next questions are about you computer use at work and home

---

Q50 Where do you get most of your information about current news events?

- Radio / TV (1)
- Internet (2)
- Newspaper (3)
- Social Media (4)
- Talking to People (5)

Q51 In an average week of seven days, about how many hours do you use a computer at WORK?

- Less than 1 hour (1)
- 1 to 5 hours (2)
- 6 to 10 hours (3)
- 11 to 20 hours (4)
- 20 + hours (5)

Q52 In an average week of seven days, about how many hours do you use a computer at HOME?

- ○ Less than 1 hour (1)
- ○ 1 to 5 hours (2)
- ○ 6 to 10 hours (3)
- ○ 11 to 20 hours (4)
- ○ 20 + hours (5)

Q53 In an average week of seven days, about how many hours do you surf the Internet

- ○ Less than 1 hour (1)
- ○ 1 to 5 hours (2)
- ○ 6 to 10 hours (3)
- ○ 11 to 20 hours (4)
- ○ 20 + hours (5)

Q54 How many hours do you play video games each week?

- Less than 1 hour (1)
- 1 to 5 hours (2)
- 6 to 10 hours (3)
- 11 to 20 hours (4)
- 20 + hours (5)

Q55 In the past year how many books have you read?

- None (1)
- 1 to 5 (2)
- 6 to 10 (3)
- 11 to 20 (4)
- 20 + (5)

Q72 The final questions are for demographic, statistical, and classification purposes

---

Q56 What is your current age?

- 18-27 (1)
- 28-37 (2)
- 38-47 (3)
- 48-57 (4)
- 58-67 (5)
- 68 + (6)

Q57 For demographic and statistical purposes, what race do you consider yourself?

- White or Anglo-American (1)
- Black or African-American (2)
- Native American or Asian (3)
- Hispanic or Latina American (4)
- Other (5)

Q58 Please indicate the number of years you have completed as a full-time law enforcement officer

_____

Q59 Are you a certified Criminal Justice Standards Training Commission instructor?

- ○ Yes (1)
- ○ No (2)

Q60 Please indicate your current assignment with your department

- ○ Patrol (1)
- ○ Investigations (2)
- ○ Administrative or Supervisory (3)
- ○ Support (4)
- ○ Other (5)

Q61 What is your County of Assignment?

- 1- Miami-Dade (1)
- 2- Duval (2)
- 3 - Hillsborough (3)
- 4 - Pinellas (4)
- 5 - Polk (5)
- 6 - Palm Beach (6)
- 7 - Orange (7)
- 8 - Volusia (8)
- 9 - Escambia (9)
- 10 - Broward (10)
- 11 - Alachua (11)
- 12 - Lake (12)
- 13 - Leon (13)
- 14 - Marion (14)
- 15 - Manatee (15)
- 16 - Sarasota (16)
- 17 - Seminole (17)
- 18 - Lee (18)
- 19 - Brevard (19)
- 20 - St. Johns (20)

- ○ 21 - Gadsden (21)
- ○ 22 - Putnam (22)
- ○ 23 - Bay (23)
- ○ 24 - St. Lucie (24)
- ○ 25 - Jackson (25)
- ○ 26 - Osceola (26)
- ○ 27 - Highlands (27)
- ○ 28 - Pasco (28)
- ○ 29 - Columbia (29)
- ○ 30 - Hardee (30)
- ○ 31 - Suwanee (31)
- ○ 32 - Indian River (32)
- ○ 33 - Santa Rosa (33)
- ○ 34 - DeSoto (34)
- ○ 35 - Madison (35)
- ○ 36 - Walton (36)
- ○ 37 - Taylor (37)
- ○ 38 - Monroe (38)
- ○ 39 - Levy (39)
- ○ 40 - Hernando (40)
- ○ 41 - Nassau (41)

- ○ 42 - Martin (42)
- ○ 43 - Okaloosa (43)
- ○ 44 - Sumpter (44)
- ○ 45 - Bradford (45)
- ○ 46 - Jefferson (46)
- ○ 47 - Citrus (47)
- ○ 48 - Clay (48)
- ○ 49 - Hendry (49)
- ○ 50 - Washington (50)
- ○ 51 - Holmes (51)
- ○ 52 - Baker (52)
- ○ 53 - Charlotte (53)
- ○ 54 - Dixie (54)
- ○ 55 - Gilchrist (55)
- ○ 56 - Hamilton (56)
- ○ 57 - Okeechobee (57)
- ○ 58 - Calhoun (58)
- ○ 59 - Franklin (59)
- ○ 60 - Glades (60)
- ○ 61 - Flagler (61)
- ○ 62 - Lafayette (62)

- ○ 63 - Union (63)
- ○ 64 Collier (64)
- ○ 65 - Wakulla (65)
- ○ 66 - Gulf (66)
- ○ 67 - Liberty (67)

Q62 What is your sex?

- ○ Male (1)
- ○ Female (2)
- ○ Prefer not to disclose (3)

Q63 What is your highest level of education?

- ☐ High School (1)
- ☐ AA / AS Degree (2)
- ☐ BA / BS Degree (3)
- ☐ Masters (4)
- ☐ Doctorate (5)
- ☐ Other professional certification (CPA, JD, etc. (6)

Q64 What is your native language?

- English (1)
- Spanish (2)
- French (3)
- German (4)
- Other (5)

Page Break

Appendix B

Table B1 - Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-27	19	3.8	4.3	4.3
	28-37	89	17.9	20.2	24.5
	38-47	136	27.4	30.9	55.5
	48-57	147	29.6	33.4	88.9
	58-67	42	8.5	9.5	98.4
	68+	7	1.4	1.6	100.0
	Total	440	88.7	100.0	
Missing	Unknown	56	11.3		
Total		496	100.0		

Table B2 - Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Response	56	11.3	11.3	11.3
	White or Anglo-American	367	74.0	74.0	85.3
	Black or African-American	19	3.8	3.8	89.1
	Native American or Asian	7	1.4	1.4	90.5
	Hispanic or Latina American	37	7.5	7.5	98.0
	Other	10	2.0	2.0	100.0
	Total	496	100.0	100.0	

Table B3 - Years of Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1	10	2.0	2.3	2.3
	1 -5	39	7.9	8.9	11.2
	6 -10	72	14.5	16.4	27.6
	11-15	63	12.7	14.4	42.0
	16-20	83	16.7	18.9	61.0
	21-25	66	13.3	15.1	76.0
	26-30	55	11.1	12.6	88.6
	31-35	35	7.1	8.0	96.6
	36-40	10	2.0	2.3	98.9
	41-45	4	.8	.9	99.8
	46+	1	.2	.2	100.0
	Total	438	88.3	100.0	
Missing	System	58	11.7		
Total		496	100.0		

Table B4 - Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Missing	78	15.7	15.7	15.7
	Male	382	77.0	77.0	92.7
	Female	36	7.3	7.3	100.0
	Total	496	100.0	100.0	

Table B5 - Native Language

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Response	59	11.9	11.9	11.9
	English	410	82.7	82.7	94.6
	Spanish	19	3.8	3.8	98.4
	French	1	.2	.2	98.6
	German	1	.2	.2	98.8
	Other	6	1.2	1.2	100.0
	Total	496	100.0	100.0	

Table B6
Work-Related

		I feel that online learning provides the knowledge to do my job	Are you a certified Criminal Justice Standard Training Commission instructor?	Please indicate your current assignment with your department	What is your highest level of education	Rural vs. Metro County of Assignment
N	Valid	473	496	496	496	496
	Missing	23	0	0	0	0
Mean		3.70	1.33	2.79	2.20	1.00
Median		4.00	1.00	2.00	2.00	1.00
Mode		4	1	2	1	1
Std. Deviation		.867	.668	1.224	1.223	.510
Variance		.752	.447	1.498	1.495	.261

Table B7 - Reading

		I sometimes require help to understand written instructions	I sometimes have trouble comprehending what I read	I am a good reader	I read carefully	I am generally capable of following written instructions	In the past year, how many books have you read?
N	Valid	458	457	450	443	442	496
	Missing	38	39	46	53	54	0
Mean		2.46	2.40	3.98	2.13	3.62	1.90
Median		2.00	2.00	4.00	2.00	4.00	2.00
Mode		2	2	4	2	4	2
Std. Deviation		.945	.980	.821	.750	.563	1.081
Variance		.892	.960	.674	.563	.317	1.170
Skewness		.503	.548	-.787	.434	-1.180	.375

Table B8 - Writing

		I am a good writer	I am generally capable of conveying my ideas in writing
N	Valid	443	441
	Missing	53	55
Mean		3.79	4.08
Median		4.00	4.00
Mode		4	4
Std. Deviation		.839	.698
Variance		.703	.487
Skewness		-.425	-.875

Table B9 - Technology Use – Part 1

		I am capable of sending and receiving email	I am capable of attaching files to an email message	I am capable of managing files on a computer	I can copy and paste text using a computer	I am capable of using online discussion boards	I am capable of using online social media such as Facebook, LinkedIn, Twitter, etc.
N	Valid	468	468	468	466	465	464
	Missing	28	28	28	30	31	32
Std. Deviation		.463	.517	.694	.639	.978	1.130
Variance		.214	.267	.482	.409	.956	1.276
Range		3	4	4	3	4	4

Table B10 Technology Use – Part 2

		Additional training would increase my use of technology	I have had adequate training in technology use	I am prepared to effectively use technology in my job	Where do you get most of your information about current news events?	In an average week of seven days, about how many hours do you use a computer at WORK?	In an average week of seven days, about how many hours do you use a computer at HOME?	In an average week of seven days, about how many hours do you surf the Internet	How many hours do you play video games each week?
N	Valid	442	441	441	496	496	496	496	496
	Missing	54	55	55	0	0	0	0	0
Mean		3.74	3.32	3.94	1.72	3.88	2.17	2.23	1.13
Std. Error of Mean		.041	.046	.037	.054	.074	.060	.059	.036
Median		4.00	3.00	4.00	2.00	5.00	2.00	2.00	1.00
Mode		4	4	4	2	5	2	2	1
Std. Deviation		.861	.968	.771	1.201	1.652	1.339	1.308	.806
Variance		.741	.938	.595	1.442	2.730	1.792	1.712	.650

Table B11 - Software

		How would you rate your level of skill with Microsoft WORD or equivalent	How would you rate your level of skill with Microsoft EXCEL or equivalent	How would you rate your level of skill with Microsoft OUTLOOK or equivalent	How would you rate your level of skill with Microsoft WINDOWS or equivalent	How would you rate your level of skill with APPLE OS	How would you rate your level of skill with Internet Explorer or equivalent
N	Valid	496	496	495	493	493	496
	Missing	0	0	1	3	3	0
Mean		1.66	1.65	1.66	1.58	1.20	1.67
Median		2.00	2.00	2.00	2.00	1.00	2.00
Mode		2	2	2	2	1	2
Std. Deviation		.864	.874	.872	.885	.730	.939
Variance		.746	.764	.760	.784	.532	.881
Skewness		-.245	-.248	-.248	-.072	.844	-.117

Table B12 - Self Belief

		I am capable of learning new technologies	I am able to balance many tasks at one time	I am goal-oriented	I am capable of critical thinking	I can learn by working independently	I am self-directed in my learning	I am capable of solving problems alone	I generally ask for help when I have a problem	I am comfortable with learning new skills
N	Valid	468	465	463	461	456	451	451	444	445
	Missing	28	31	33	35	40	45	45	52	51
Mean		3.51	4.11	4.33	4.40	4.13	3.92	3.57	3.71	4.23
Median		4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode		4	4	4	4	4	4	4	4	4
Std. Deviation		.545	.707	.588	.554	.666	.708	.608	.830	.537
Variance		.297	.500	.346	.306	.444	.501	.370	.689	.288
Skewness		-.488	-.851	-.293	-.269	-.505	-.421	-1.112	-.823	.038
Std. Error of Skewness		.113	.113	.113	.114	.114	.115	.115	.116	.116
Range		2	4	3	3	3	3	2	4	3

Table B13 - Self-Management

		I am capable of prioritizing my responsibilities	I am a good time manager	I am a procrastinator	I am self-disciplined when it comes to learning	I often leave tasks unfinished	I frequently wait until the last minute to work on assignments related to learning	I sometimes need reminders of assignment due dates	I sometimes need incentives or rewards to motivate me to complete tasks timely
N	Valid	465	465	465	462	459	458	457	457
	Missing	31	31	31	34	37	38	39	39
Mean		4.52	4.22	2.51	4.08	1.96	2.30	2.80	2.20
Median		5.00	4.00	2.00	4.00	2.00	2.00	3.00	2.00
Mode		5	4	2	4	2	2	2	2
Std. Deviation		.545	.690	1.024	.703	.730	.947	1.108	.880
Variance		.298	.476	1.048	.494	.533	.897	1.227	.774
Skewness		-.601	-.642	.246	-.533	.841	.659	.045	.707

Table B14 - Ease of Use - Learning Management System

		I found our online learning program easy to learn	I found it easy to log onto our online learning program	I found the instructions to be very useful in helping me work within the online learning	I feel the online learning program would be easier to use if I had received classroom training and practice
N	Valid	486	483	476	474
	Missing	10	13	20	22
Mean		4.07	4.22	3.99	2.80
Std. Error of Mean		.036	.034	.034	.047
Median		4.15[a]	4.30[a]	4.03[a]	2.71[a]
Mode		4	4	4	2
Std. Deviation		.783	.751	.737	1.014
Variance		.614	.564	.543	1.029
Skewness		-1.234	-1.248	-.836	.426
Std. Error of Skewness		.111	.111	.112	.112
Kurtosis		2.965	2.820	1.824	-.366
Std. Error of Kurtosis		.221	.222	.223	.224
Range		4	4	4	4
Minimum		1	1	1	1
Maximum		5	5	5	5

a. Calculated from grouped data.

Table B15 - Learning Preferences

		Because of my lifestyle and activities, I prefer online learning	Because of my lifestyle and activities, I prefer physical classroom learning	Because of my lifestyle and activities, I prefer a combination of online and physical classroom learning	I need face to face interaction to learn	I frequently need classroom discussion to learn
N	Valid	456	455	454	450	446
	Missing	40	41	42	46	50
Mean		3.51	2.91	3.51	2.54	2.60
Median		3.00	3.00	4.00	2.50	3.00
Mode		3	3	4	2	3
Std. Deviation		1.027	.923	.927	.781	.834
Variance		1.055	.852	.860	.610	.695

Table B16 – H1 Rural vs. Metro Factor: Online Learning

Rural vs Metro County of Assignment

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		.179	2	.090	.698	.498
	Linear Term	Unweighted	.178	1	.178	1.391	.239
		Weighted	.149	1	.149	1.165	.281
		Deviation	.030	1	.030	.232	.630
Within Groups			55.041	429	.128		
Total			55.220	431			

Table B17 – H1 Rural vs. Metro Factor: Classroom

Rural vs Metro County of Assignment

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		.151	2	.076	.588	.556
	Linear Term	Unweighted	.028	1	.028	.219	.640
		Weighted	.018	1	.018	.143	.705
		Deviation	.133	1	.133	1.032	.310
Within Groups			55.046	428	.129		
Total			55.197	430			

Table B18 – H1 Rural vs. Metro Factor: Blended

Rural vs Metro County of Assignment

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		.011	2	.005	.042	.959
	Linear Term	Unweighted	.006	1	.006	.044	.834
		Weighted	.009	1	.009	.072	.789
		Deviation	.002	1	.002	.012	.913
Within Groups			54.464	427	.128		
Total			54.474	429			

Table B19 – H2 Online Job KSA Factor Online Learning

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		44.259	2	22.129	33.825	.000
	Linear Term	Unweighted	34.606	1	34.606	52.896	.000
		Weighted	43.341	1	43.341	66.248	.000
		Deviation	.918	1	.918	1.403	.237
Within Groups			296.364	453	.654		
Total			340.623	455			

Table B20 – H2 Online Job KSA Factor Classroom Learning

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		37.434	2	18.717	27.912	.000
	Linear Term	Unweighted	37.223	1	37.223	55.509	.000
		Weighted	36.541	1	36.541	54.491	.000
		Deviation	.893	1	.893	1.332	.249
Within Groups			303.102	452	.671		
Total			340.536	454			

Table B21 – H2 Online Job KSA Factor: Blended

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		11.067	2	5.534	7.586	.001
	Linear Term	Unweighted	11.066	1	11.066	15.171	.000
		Weighted	9.523	1	9.523	13.055	.000
		Deviation	1.545	1	1.545	2.118	.146
Within Groups			328.970	451	.729		
Total			340.037	453			

Table B22 – H3 Online KSA Factor: Age

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		6.195	6	1.032	1.380	.221
	Linear Term	Unweighted	.265	1	.265	.354	.552
		Weighted	2.834	1	2.834	3.787	.052
		Deviation	3.361	5	.672	.898	.482
Within Groups			348.773	466	.748		
Total			354.968	472			

Table B23 – H3 Online Job KSA Factor: Race

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		4.131	5	.826	1.100	.360
	Linear Term	Unweighted	.485	1	.485	.645	.422
		Weighted	1.192	1	1.192	1.587	.208
		Deviation	2.939	4	.735	.978	.419
Within Groups			350.837	467	.751		
Total			354.968	472			

Table B24 – H3 Online Job KSA Factor: Sex

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		4.677	2	2.339	3.138	.044
	Linear Term	Unweighted	4.667	1	4.667	6.262	.013
		Weighted	4.583	1	4.583	6.149	.013
		Deviation	.094	1	.094	.126	.722
Within Groups			350.291	470	.745		
Total			354.968	472			

Table B25 – H3 Online Job KSA Factor: Years of Experience

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		4.708	10	.471	.634	.785
	Linear Term	Unweighted	.033	1	.033	.044	.834
		Weighted	.245	1	.245	.329	.567
		Deviation	4.463	9	.496	.667	.739
Within Groups			317.310	427	.743		
Total			322.018	437			

Table B26 – H4 Online Job KSA Factor: Education

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		5.132	6	.855	1.139	.338
	Linear Term	Unweighted	.092	1	.092	.122	.727
		Weighted	.086	1	.086	.114	.736
		Deviation	5.046	5	1.009	1.344	.244
Within Groups			349.837	466	.751		
Total			354.968	472			

Table B27 – H4 Online Job KSA Factor: Certified Instructor

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		9.786	2	4.893	6.662	.001
	Linear Term	Unweighted	4.555	1	4.555	6.202	.013
		Weighted	9.478	1	9.478	12.905	.000
		Deviation	.308	1	.308	.419	.518
Within Groups			345.183	470	.734		
Total			354.968	472			

Table B28 – H5 Online Job KSA Factor: Duty Assignment

Q5 I feel that online learning provides the knowledge to do my job

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		2.568	3	.856	1.139	.333
	Linear Term	Weighted	1.812	1	1.812	2.412	.121
		Deviation	.755	2	.378	.503	.605
Within Groups			352.401	469	.751		
Total			354.968	472			

Appendix C

Informed Consent

Hello, my name is Keith Gaston, and I am a doctoral student at the University of North Florida. I am conducting a research study on the use of distance learning for in-service or professional development training in law enforcement in order to analyze the influence of technology on the professional development learning of law enforcement personnel. The purpose is to improve the effectiveness of distance learning used by law enforcement agencies.

If you take part in my project, you will complete an online survey. I expect that participation in this study will take less than 15 minutes of your time. You may stop and start the survey at will. Your responses will be anonymous. Your agency will not have access to your individual responses; only the final report Only authorized research personnel will have access to your responses.

Although there are no direct benefits to or compensation for taking part in this study, others may benefit from the information I learn from the results of this study. Additionally, there are no foreseeable risks
for taking part in this project. Participation is voluntary, and there are no penalties for deciding not to participate, skipping questions, or withdrawing your participation. You may choose not to participate in this research without negatively impacting your relationship with your agency.

If you have any questions or concerns about this project, please contact me. You may print a copy of this form for your records if you desire.

If you have questions about your rights as a research participant or if you would like to contact someone about a research-related injury, please contact the chair of the UNF Institutional Review Board by
calling (904) 620-2498 or emailing irb@unf.edu.

Thank you for your

consideration. Sincerely,

Keith E. Gaston
Phone:
Email:

By consenting to participate, you are attesting that you are at least 18 years of age and agree to take part in this research study.

UNF
UNIVERSITY of NORTH FLORIDA.

Office of Research and Sponsored Programs
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Jacksonville, FL 32224-2665
904-620-2455 FAX 904-620-2457
Equal Opportunity/Equal Access/Affirmative Action Institution

MEMORANDUM

DATE: April 10, 2018

UNF IRB Number: 1152026-2
Exemption Date: 04-10-2018
Status Report Due Date: 04-10-2021
Processed on behalf of UNF's IRB

TO: Mr. Keith Gaston

VIA: Dr. David Forde
Criminology and Criminal Justice

FROM: Dr. Christopher Joyce, Vice Chairperson
On behalf of the UNF Institutional Review Board

RE: Declaration of Exempt Status for IRB#1152026-2:
"Distance Learning for Professional Development in Law Enforcement: What Works?"

Your project, "Distance Learning for Professional Development in Law Enforcement: What Works?" was reviewed on behalf of the UNF Institutional Review Board and declared "Exempt" Category 2. Based on the UNF IRB Standard Operating Procedures regarding exempt projects, the UNF IRB no longer reviews and approves exempt research according to the 45 CFR 46 regulations. Projects declared exempt review are only reviewed to the extent necessary to confirm exempt status.

Please note: In order to ensure that data are anonymous in Qualtrics, please select the "Anonymize Response" option under Survey Options. If you will send the survey via the email option in Qualtrics, you will also need to use the "Anonymous Link" option under Advanced Options in the Distribute Survey tab in Qualtrics to ensure email addresses are not linked to responses.

Once data collection under the exempt status begins, the researchers agree to abide by these requirements:

- All investigators and co-investigators, or those who obtain informed consent, collect data, or have access to identifiable data are trained in the ethical principles and federal, state, and institutional policies governing human subjects research (please see the FAQs on UNF IRB CITI Training for more information).
- An informed consent process will be used, when necessary, to ensure that participants voluntarily consent to participate in the research and are provided with pertinent information such as identification of the activity as research; a description of the procedures, right to withdraw at any time, risks, and benefits; and contact information for the PI and IRB chair.
- Human subjects will be selected equitably so that the risks and benefits of research are justly distributed.
- The IRB will be informed as soon as practicable but no later than 3 business days from receipt of any complaints from participants regarding risks and benefits of the research.

- The IRB will be informed as soon as practicable but no later than 3 business days from receipt of the complaint of any information and unexpected or adverse events that would increase the risk to the participants and cause the level of review to change. Please use the Event Report Form to submit information about such events.
- The confidentiality and privacy of the participants and the research data will be maintained appropriately.

While the exempt status is effective for the life of the study, if it is modified, all substantive changes must be submitted to the IRB for prospective review. In some circumstances, changes to the protocol may disqualify the project from exempt status. Revisions in procedures or documents that would change the review level from exempt to expedited or full board review include, but are not limited to, the following:

- New knowledge that increases the risk level;
- Use of methods that do not meet the exempt criteria;
- Surveying or interview children or participating in the activities being observed;
- Change in the way identifiers are recorded so that participants can be identified;
- Addition of an instrument, survey questions, or other change in instrumentation that could pose more than minimal risk;
- Addition of prisoners as research participants;
- Addition of other vulnerable populations;
- Under certain circumstances, addition of a funding source

To submit an amendment, please complete an Amendment Request Document and submit it along with any updated documents affected by the changes via a new package in IRBNet. If investigators are unsure of whether an amendment needs to be submitted or if they have questions about the amendment review process, they should contact the IRB staff for clarification.

Your study was declared exempt effective 04/10/2018. Please submit an Exempt Status Report by **04/10/2021** if this project is still active at the end of three years. However, if the project is complete and you would like to close the project, please submit a Closing Report Form. This will remove the project from the group of projects subject to an audit. An investigator must close a project when the research no longer meets the definition of human subject research (e.g., data collection is complete and data are de-identified so the researcher does not have the ability to match data to participants) or data collection *and* analysis are complete. If the IRB has not received correspondence at the three-year anniversary, you will be reminded to submit an Exempt Status Report. If no Exempt Status Report is received from the Principal Investigator within 90 days of the status report due date listed above, then the IRB will close the research file. The closing report or exempt status report will need to be submitted as a new package in IRBNet.

CITI Training for this Project:

Name	CITI Expiration Date
Mr. Gaston	02/11/2020
Dr. Forde	07/26/2018

UNF IRB Number: 1152026-2
Exemption Date: 04-10-2018
Status Report Due Date: 04-10-2021
Processed on behalf of UNF's IRB

All principal investigators, co-investigators, those who obtain informed consent, collect data, or have access to identifiable data must be CITI certified in the protection of human subjects. As you may know, **CITI Course Completion Reports are valid for 3 years**. Please note that Dr. Forde's CITI completion report will expire this year. Please renew CITI training before your current training expires. Although CITI sends out reminders 90 days prior to expiration, it is the investigator's responsibility to complete the refresher course when it becomes available. You can access the CITI refresher course by following this link: http://www.citiprogram.org/.

Should you have questions regarding your project or any other IRB issues, please contact the research integrity unit of the Office of Research and Sponsored Programs by emailing IRB@unf.edu or calling (904) 620-2455.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within UNF's records. All records shall be accessible for inspection and copying by authorized representatives of the department or agency at reasonable times and in a reasonable manner. A copy of this memo may also be sent to the dean and/or chair of your department.

UNF IRB Number: 1152026-2
Exemption Date: 04-10-2018
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February 27, 2018

Office of Research and Sponsored Programs
University of North Florida
Building 4, Room 1501
1 UNF Drive
Jacksonville, Florida 32224-7699

To whom it may concern:

Please accept this letter of support for the research being conducted by Keith E. Gaston at the University of North Florida into the use of online or distance learning for professional development of law enforcement personnel in Florida.

We will disseminate the survey link to the Florida Highway Patrol sworn law enforcement personnel in our agency when received. If you need any further information, please do not hesitate to contact me.

Sincerely,

Colonel Gene S. Spaulding
Director
Florida Highway Patrol

cc: Major Keith E. Gaston

Florida Fish and Wildlife Conservation Commission

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March 13, 2018

Office of Researched and Sponsored Programs
University of North Florida
1 UNF Drive
Building 4, Room 1501
Jacksonville, FL 32224

To whom it may concern:

Please accept this letter of support for the research being conducted by Major Keith E. Gaston at the University of North Florida into the use of online or distance learning for professional development of law enforcement personnel in Florida.

We will disseminate the survey link to the Florida Fish and Wildlife Conservation Commission sworn law enforcement personnel when received. If you need any further information, please do not hesitate to contact me.

Sincerely,

Colonel Curtis K. Brown
Director, Division of Law Enforcement

cc: Major Keith E. Gaston
Florida Highway Patrol

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