THE IMPACT OF IN-CAR MOBILE VIDEO SYSTEM ON POLICING

by

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Presented to the Faculty of the Graduate School of Criminology and Criminal Justice

The University of Texas at Arlington in Partial Fulfillment

of the Requirements

for the Degree of

MASTER OF ARTS IN CRIMINOLOGY AND CRIMINAL JUSTICE

THE UNIVERSITY OF TEXAS AT ARLINGTON

August 2006

ACKNOWLEDGEMENTS

I would like to extend my sincerest appreciation to Dr. Alejandro del Carmen, Dr. Rodrigo Paris, and Dr. John W. Stickels for their assistance in the completion of this thesis. Foremost, I would like to thank my advisor Dr. Alejandro del Carmen, for not only his academic guidance, but also for his perspective on the social aspect of academia.

My sincerest thanks also go to Chief Bruce Ure of the Watauga Department of Public Safety, Captain Mike Hughes of the Saginaw Police Department, and Captain Dave Tatsak of the Lake Worth Police Department. With the tremendous amount of support and cooperation from Chief Ure, Captain Hughes and Captain Tatsak, I was able to successfully implement my survey in their police departments.

Finally, I would like to thank all of my family, especially my wife Crystal for providing me a constant source of inspiration.

July 10, 2006

ABSTRACT

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Publication No. _____

Alan HongChen Ma, M.A.

The University of Texas at Arlington, 2006

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This research examines education and police experience as they relate to police officers' perceptions on the use of in-car mobile video system. A sample of police officers from area police departments in the Dallas Fort Worth Metroplex was studied using a self-administered survey, which consisted of 27 items. The research suggests that there are indeed differences in the perceptions of in-car mobile video system as it relates to police experience.

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CHAPTER 1

INTRODUCTION

Advancements in policing have been supported substantially by technology. The in-car mobile video is one of the valuable policing and management tools that was developed and implemented since the 1980s (Rosenblatt et al. 2004). A survey conducted by the International Association of Chief of Police revealed that in-car mobile video system was the most frequently used video technology in police agencies, and the video technology of highest value (Nichols, 2001). Although in-car mobile video systems have been in use in police departments throughout the United States since 1980s, no comprehensive studies had been conducted in which the research controlled for officer education and police experience as they relate to officers' perceptions with regards to the use of in-car mobile video system.

The purpose of this study is to examine police officers' perception on the use of in-car mobile video system. More specifically, this study attempts to determine police officers' perception on the use of in-car mobile video system as it relates to officers' professional conduct, citizen contacts, job performance, decision on use of force, officer safety and training. The study also attempts to ascertain if officers differ in their responses while controlling for officers' education and experience.

1.1 Definitions

For purposes of this study, the term In-Car Mobile Video System is defined as a video recording device installed in a police vehicle designed to capture the scene for documentation. The standard mobile video system is comprised of camera, wired and wireless audio system, recording device, control panel, and monitor. Police officer for purposes of this study is defined as a Peace Officer licensed by the Texas Commission on Law Enforcement and commissioned by the City of Watauga, City of Saginaw, or City of Lake Worth, Texas Police Department.

1.2 Plan of Presentation

In Chapter Two of this study the author presents a review of literature separated into four subchapters. In subchapter one the author reviews the history of policing in the United States; subchapter two continues with a discussion on the development of police technology. In subchapter three the author presents a review of literature on the development of in-car mobile video system. The author concluded Chapter Two with a review of case laws related to the police use of in-car mobile video system.

The author in Chapter Three presents the methodology of this study. In subchapter one of this chapter the author reviews the design of this study. In subchapter two, the author reviews the population of the study and the selection of the population. The author reviews the survey instrument in subchapter three, procedures of the data collection in subchapter four, and the data analysis in subchapter five.

In Chapter Four the author reviews the finding of the study. In subchapter one, the author discusses the demographics of the police officers who participated in the

study, including their gender, age, ethnicity, current assignment, rank, and education level. The author revealed the results of t-test comparisons between officers' education on 14 variables in subchapter two and the results of t-test comparisons between officer's experience in subchapter three.

In chapter five, the author aims to include possible policy implications and suggestions for future research.

CHAPTER 2

REVIEW OF THE LITERATURE

In this chapter, the author will discuss the literature review as it corresponds with the history of policing in the United States, the advancement of police technology, the development of in-car mobile video system, and the case laws related to the police use of in-car mobile video system.

Since the 1980s, video surveillance and recording technology have become an inexpensive and readily available resource. Their use has spread to many aspects to the lives of conventional people in the United States. People are watched and recorded by a surveillance camera when they withdraw cash from an automatic teller machine; when they walk through the lobby of many office buildings; when they shop in a department store; or when they pass through an airport security checkpoint (Maghan et al., 2002). Jails and prisons through the United States extensively monitor inmates with video cameras. Video surveillance and recording offers tangible benefits. It continuously records the activity in any area, day or night, without fatigue. It deters crime and documents the truth about what went on (Maghan et al., 2002).

In the late 1990s, lawsuits alleging race-based traffic stops were being filed against state police and highway patrol agencies throughout the United States (Westphal, 2004). In some instances, the courts ruled that racial profiling was occurring.

These court findings strengthened the public perception that racial profiling by police did occur and weakened the public's confidence in the police (Westphal, 2004). At the same time, assaults on officers were on the increase. Responding to these concerns, state and federal legislative bodies began enacting laws requiring all police agencies within their jurisdiction to document details of every traffic stop (Rosenblatt et al. 2004).

The Department of Justice, Office of Community Oriented Policing Services recognized the value of the in-car camera in addressing officer safety issues and allegations of racial profiling while enhancing the public trust (Rosenblatt et al. 2004). Recognizing that the purchase of cameras for police vehicles was expensive and beyond the budgets of most police agencies, the Officer of Community Oriented Policing Service initiated the In-Car Camera Initiative Program to state police and highway patrol agencies throughout the United States, delivering the first funds to state agencies in 2000 (Rosenblatt et al. 2004).

Since the year of 2000, police agencies in the United States and worldwide are applying this technology to patrol operations by equipping their vehicles with mobile video recording equipment (Rosenblatt et al. 2004). Although the early attempts to place cameras in patrol vehicles were plagued with technical and safety problems, miniaturization and advances in technology have made the use of the mobile video recorder practical and affordable (Rosenblatt et al. 2004). As technology in the field of audio/visual recordings evolves, equipping police vehicles with in-car cameras will be the norm and no longer the exception (Rosenblatt et al. 2004).

2.1 History of Policing in United States

Over a period of two hundred years, law enforcement in early time of the United States evolved from pragmatic reactions to crime and public disorder to the beginnings of organized police departments (Wadman & Allison, 2004). Several factors influenced this development, including the nature of crime, the growth of cities, political and economic conditions, and the ideological foundation of the nation itself (Wadman & Allison, 2004).

Like much of America's common-law tradition, the origins of modern policing can be linked directly to its English heritage. Ideas concerning community policing, crime prevention, the posse, constables, and sheriffs developed from English law enforcement (Uchida, 2001).

2.1.1 Colonial America (17th and 18th centuries)

In colonial America (17th and 18th centuries), policing followed the English systems. The sheriff, constable, and watch were easily adapted to the colonies (Uchida, 2001). In the larger cities and towns, such as New York, Boston, and Philadelphia constables and the night watch performed a wide variety of tasks. The night watch reported fires, raised the hue and cry, maintained street lamps, arrested or detained suspicious persons, and walked the rounds. Constables engaged in similarly broad tasks, such as taking suspects to court, eliminating health hazards, bringing witnesses to court, and so on (Uchida, 2001). For the most part, the activities of the constables and the night watch were "reactive" in nature (Uchida, 2001).

2.1.2 Nineteenth Century Policing in London

From 1750 to 1820, the population of London, England nearly doubled (Miller, 1977) and the urban economy became more complex and specialized. With industrial growth came a breakdown in social control, as crime, riots, disorder, and public health problems disrupted the city. The constable-watch system of law enforcement could no longer deal successfully with the problems of the day, and alternative solutions were devised (Miller, 1977). As public support rose and Parliamentary opposition waned, The English Parliament passed the Metropolitan Act in 1829 (King, 2004). This act was a part of the legislation that was introduced by Sir Robert Peel, who was sworn in and received the seal of the Home Office on January 17, 1822 (King, 2004). The hallmark of Peel's reform was an emphasis on preventing, rather than simply reacting to crime. It is this focus that earned the London Metropolitan Police Force (Miller, 1977).

In addition to its focus on crime prevention, the new London police force, which replaced the city's night watch and various independent local forces, was a full-time, day and night operation composed of more than 3,000 salaried officers (Miller, 1977). Sir Robert Peel expressed his ideas on the new force, both to the force and the public that, "It should be understood at the outset, that the object to be attained is the prevention of crime. To this great end every effort of the police is to be directed. He (the constable) will be civil and obliging to all people of every rank and class" (King, 2004, p. 50-51).

Sir Robert Peel also believed that, "Police, at all times, should maintain a relationship with the public that gives reality to the historic tradition that the police are

the public and the public are the police; the police being only members of the public who are paid to give full-time attention to duties which are incumbent on every citizen in the interests of community welfare and existence" (Lee, 1901, p. 57).

2.1.3 Nineteenth Century Policing in the United States

In the early nineteenth century, the New York watch system seemed sufficient to make citizens feel relatively safe. As urban problems created by rapid growth took hold, however, riots and crime became serious threats to social stability (Wadman & Allison, 2004). As the problems of urban life grew intolerable and threatened economic stability, the inefficiencies of the police system became a focal point for government and business leaders. As the political and business elites followed the transformation of the police in London, the work of Sir Robert Peel became a popular model for New York City (Wadman & Allison, 2004). In 1845 New York City became the first city in the United States to adopt elements of the Metropolitan Police Act (Wadman & Allison, 2004). The New York Legislature passed a law that authorized creating the first unified day and night police, thus abolishing its night watch system (More, 1976). As the result of this legislation, the new New York City police force consisted of 800 salaried, full-time officers who patrolled beats both night and day, replacing the city's night watch and the constabulary, as well as dock masters and various inspectors (Vila & Morris, 1999). Following the New York model, other cities developed their own unified police forces during the next decade. By the 1870's the Nation's largest cities had full-time police forces (More, 1976). These early police departments do, however, represent the genesis of modern police organizations. In the development of early policing in these

cities, the regulatory functions of disconnected municipal departments came together under primitive police departments. From health codes and building permits to licensing taverns and brothels and the execution of arrest warrants, what had been carried out by independent departments now came under the authority of police (Wadman & Allison, 2004).

While the first police departments in the United States modeled themselves after the London Metropolitan Police, they borrowed selectively rather the exactly (Uchida, 2001). The most notable carryover was the adoption of the preventive patrol idea. A police presence would alter the behavior of individuals and would be available to maintain order in an efficient manner (Uchida, 2001).

Although a State police force, known as the "Texas Rangers," was organized in 1835 to supplement Texas' military forces, modern State police organizations did not emerge in The United States until the turn of the 20th century (More, 1976). In 1905, the Governor of Pennsylvania, in the absence of an effective sheriff-constable system, created the first State force (More, 1976). Its initial purpose was to cope with a public dispute between labor and management. The majority of State departments were established shortly after World War I to deal with the increasing problem of auto traffic and the accompanying wave of car thefts (More, 1976).

One of the major themes in the study of 19th century policing is the large-scale corruption that occurred in numerous departments across the country (Uchida, 2001). Police corruption was part of a broader social and political problem. During the period, political machines ran municipal governments. Municipal police agencies were also

under the aegis of political parties (Uchida, 2001). By most accounts, patrolmen did the job for the money, not as a career, and as long as one's political machine was in power, the potential for earnings was great (Rosenblatt et al. 2004). During this time, an appointment to the New York Police Department required the blessing of the local political parties plus a $300 bribe (Rosenblatt et al. 2004). Officers who did not approve of the graft and corruption of others found themselves transferred to less-than-desirable areas and promotions were also denied (Uchida, 2001). These types of problems were endemic to most urban police agencies throughout the country. They led to inefficiency and inequality of police services (Uchida, 2001).

A broad reform effort began to emerge toward the end of the 19th century. By the 1880s, upper-middle-class educated Protestants who opposed the political machines, sought improvements in government, and desired a change in American morality began to take on the boss machines. Believing in pragmatism, legal realism, social gospel, and humanitarianism, the so-called Progressives set out to reform society at the expense of the bosses and those they served (Rosenblatt et al. 2004). They believed that by eliminating machine politics from government, all facets of social services, including the police, would improve (Uchida, 2001).

These reformers found that the police were without discipline, strong leadership and qualified personnel (Uchida, 2001). To improve conditions, the Progressives recommended that the departments should be centralized, personnel should be upgraded, and the police function should be narrowed (Fogelson, 1977). On of the major aspects of police reform in the Progressive Era was the trend toward military

models of police organization. Reform began with putting police in uniforms, an effort to make police more visible and to give police a sense of camaraderie on the job (Wadman & Allison, 2004).

Even though, the reform movement resulted, in part, in the elimination of the widespread graft and corruption of the 1890s, but substantive changes in policing did not take place (Uchida, 2001). Robert Fogelson (1997) suggested several reasons for the failure of reform. First, political machines were too difficult to break. Second, police officers themselves resented the Progressives' interventions. Finally, the reforms failed because the idea of policing could not be divorced from polities. That is, the character of the big-city police was interconnected with policymaking agencies that helped to decide which laws were enforced, which public was served, and whose peace was kept. Separating the police completely from politics could not take place (Fogelson, 1977).

2.1.4 Twentieth Century Policing in the United States

A second reform effort emerged in the wake of the failure of the Progressives. From about 1910 to 1960 police chiefs carried on another reform movement, advocating that police adopt the professional model (Uchida, 2001). Uchida (2001) indicated that the professional department embodied a number of characteristics. First, the officers were experts; they applied knowledge to their tasks and were the only ones qualified to do the job. Second, the department was autonomous from external influences, such as political parties. This also meant that the department made its own rules and regulated its personnel. Finally, the department was administratively efficient, in that it carried

out its mandate to enforce the law through modern technology and business-like practices.

Technological changes also enabled the police to move toward professionalism. The patrol car, two-way-radio, and telephone altered the way in which the police operated and the manner in which citizens made use of the police (Uchida, 2001). During this reform movement, police experts and administrators made progress toward professionalism and were beginning to see themselves and their patrol officers as professional, career-oriented crime fighters, protecting the public (Wadman & Allison, 2004).

The decade following World War II was one of great change in the society of the United States. The postwar years brought relative peace, but only under the increasingly dark clouds of the new Cold War (Wadman & Allison, 2004). As with the United States military's infatuation with technology to fight the Cold War, police was turned to technological advances to help them in the war on crime. These technology advancements became an integral part of the professional became an integral part of the professional model of policing (Weston & Wells, 1974). Officers on patrol responded quickly by utilizing the latest technology in communications, whereas detectives handled criminal investigations more effectively with the latest advancements in scientific technology. The more effectively and efficiently police departments responded to crime, the more they were viewed as being professional (Wadman & Allison, 2004). The police departments in the United States in the 1950s took great pride in using the latest techniques and practices and sought superior statistical

assessment ratings against other departments as a measure of their professionalism (Stead, 1977). With this strong commitment to professionalism and growing elitism, police began to lose touch with the citizens they were charged to protect and serve. The desire for cost-efficient effective police service overshadowed the immeasurable value of police-community interaction (Wadman & Olson, 1990). Military-style police organizations in the 1950s gave the public a perception that police were closed, secretive, and unreceptive to public discourse about policing. Police viewed community problems unrelated to crime as issues outside their purview and police officers isolated themselves from the communities they served (Wadman & Allison, 2004).

No other decade in the history of United States proved so turbulent than that of the 1960s. The civil rights movement, Vietnam, public disorder and riots, political assassinations, and the counterculture/antiauthority movement threatened the very fabric of the nation (Wadman & Allison, 2004). By the end of the 1960s, problem in policing became a national issue, drawing once again the attention of the federal government. Commissions, reports, and administrative laws forced police departments to finally go the extra distance to resolve conflicts in police-community relations and better serve the public good (Wadman & Allison, 2004).

It was common practice in the 1960s to shift patrol officers from one beat to another on a regular basis. As a consequence, police seldom patrolled an area long enough to really get to know it and understand the issues affecting the neighborhoods (Wilson & McLaren, 1972). By the end of the 1960s, police had basically become an occupation force for high crime, inner city neighborhoods. Larger police departments

developed shift schedules that consistently transferred police officers in and out of these areas, prohibiting the time necessary to develop close neighborhood relationships that might help resolve some of the inner city problems (Wadman & Allison, 2004). The hostility between police and inner city neighborhoods erupted several times during the 1960s (Walker, 1992). Traditional police methods based on concepts of professionalism had only irritated community relations. Moreover, the aggressiveness of what amounted to racial profiling by police only aggravated the situation. Racial tension between the police and black neighborhoods reached unprecedented levels across the nation, even in comparison to that in the early twentieth century (Walker, 1992). The face of policing in the United States was deeply affected by the 1960s. Dramatic changes in the way police approached community and crime problems began a forced transformation that had taken most of the 1970s to institutionally impress policing in the United States (Wadman & Allison, 2004).

The 1970s are generally treated as a period of malaise in the history of United States, as the Vietnam War ended without a sense of closure, the Watergate scandal intensified general distrust in government (Wadman & Allison, 2004). As the turbulence of the 1960s passed into memory, police began to return to crime fighting and in some ways lose sight of the community relations issues that had caused so much trouble during that decade (Wadman & Allison, 2004). Federal programs spurred by the 1967 commission report made some headway in providing long-term solutions to some police problems. In 1968, the federal Law Enforcement Assistance Administration began awarding fully funded educational opportunities to police officers and giving

large grants to police departments to enhance crime-fighting technology at the local level (Wadman & Allison, 2004).

By the mid 1970s, the crises of the 1960s had disappeared, and for a while so too did attention to police issues. Downturns in the economy and high interest rates forced municipalities to tighten their budgetary belts, thus limiting the ability of police to experiment with new strategies (Sklonick & Bayley, 1986). Professionally, police efforts in the 1970s focused on management, control of corruption, and police effectiveness (Walker, 1999). In a number of cities, community groups pressed for the establishment of formal mechanisms to provide influence over police procedures and conduct (Walker, 1999).

2.1.5 Community Oriented Policing

In the 1980s, the National Institute of Justice, the Police Foundation, the Police Executive Research Forum, and the Charles Mott Foundation sponsored research in community and problem-oriented policing in six major cities of the United States *(Trojanowicz & Bucqueroux, 1990)*. The experiments included the restoration of foot patrols, with a major emphasis on community problem-solving. Evaluation of these experiments found that foot patrol contributed to the quality of community life, reduced fear, increased citizen satisfaction with police, and improved police attitudes toward citizens. Moreover, officers walking beats had higher morale, greater job satisfaction, and a more favorable attitude toward citizens in their neighborhoods than did officers assigned to patrol cars *(Trojanowicz & Bucqueroux, 1990)*.

Herman Goldstein (1979) write regarding to problem-oriented policing that the role of the police should focus more directly on identifying, defining, analyzing, and solving specific and persistent problems in the community. Goldstein (1979) believes that the approaching of problem-oriented policing calls for the police to take greater initiative in attempting to deal with problems rather than resign themselves to living with them. Goldstein (1979) suggested to focus on problems, because it is a practical and concrete approach, is attractive to both citizens and the police. A problem-oriented approach, with its greater appeal, has the potential for becoming a vehicle through which long-sought organizational change might be more effectively and more rapidly achieved (Goldstein, 1979).

James Wilson and George Kelling (1982) brought this new strategy to broad public attention through a concept known as "Broken Windows." Wilson and Kelling (1982) believe leaving an un-repaired broken window in a building would result in all the windows being broken before long. The solution was to fix the first "broken window." According to Wilson and Kelling (1982), police could do the repairs. Police had traditionally helped to maintain the informal social controls of a community.

Community-oriented policing has sparked the most fundamental change in policing and promises to carry policing well into the twenty-first century (Dietz, 1997). Community policing is a philosophy of policing (Gary 1995). Gary Cordner (1995) write, "community policing takes the view that, in a free society, citizens should have open access to police organizations and input to police policies and decisions… Community policing embraces a broad view of the police function rather than a narrow

focus on crime fighting or law enforcement… Community policing supports tailored policing based on local norms and values and individual needs… Community policing recommends less reliance on the patrol car and more emphasis on face-to-face interactions… It emphasizes the geographic basis of assignment and responsibility by shifting the fundamental unit of patrol accountability from time of day to place to establish 24-hour responsibility for smaller areas… It also emphasizes a more proactive and preventive orientation, in contrast to the reactive focus that has characterized much of policing under the professional model."

Community policing, with a problem-oriented police focus, provided a hopeful model for successful crime prevention and improved police-community relations; and police and citizens are being preventive against crime through building prosperity in their communities (Wadman & Allison, 2004).

2.2 Police Technology

Most criminal justice scholars tend to divide the history of policing in the United States into three eras – the political, the professional and community-oriented (Foster, 2005). As these eras progressed, technology took on a greater role in policing. Just as policing progressed, technology took on a greater role in policing (Foster, 2005).

The technological advances of the industrial period were extraordinary. Spurred by industrialization and progressivism from the 1870s through the 1910s, science and technology enjoyed a pinnacle of prominence that would not return until World War II (Wadman & Allison, 2004). Technology during this time was seen as a means to make life easier and more efficient and to increase production of an already productive

America (Wadman & Allison, 2004). Through the trend of professionalism during the Progressive movement, police across the United States adapted and utilized the amazing technological tools that enabled them to better protect and serve their communities (Wadman & Allison, 2004).

The Progressive movement initiated the police love affair with technology, and like any love affair, highs and low in the relationship characterized the experience. Technology was not the panacea that many thought it was, but I did move the odds more in favor of the police rather than of the criminal (Walker, 1977). Technology also changed the relationship between the police and the communities they served, as the new, more mobile patrol officers became more isolated from the people they once knew as foot-patrol officers (Walker, 1977).

The major developments in police technology from the mid-nineteenth century through the twentieth century centered around communication, transportation, weapons, crime analysis, the use of science, and computer technology (Wadman & Allison, 2004).

2.2.1 Nineteenth Century Police Technology in the United States

The advances in communication technology greatly improved the ability of police to respond to calls of distress and the effectiveness of police as a deterrent. The telegraph, telephone, and radio each had a profound impact on policing (Wadman & Allison, 2004). As far back as the 1600s, night watches used the rattle as an alarm to alert citizens and other watchmen to trouble (Berg, 1992). Rattles stayed in use until the advent of the whistle and telegraph. With the decline of the regular watch and the

organization of modern patrols, rattles were retired from police service (Berg, 1992). Whistles came into sue in the early 1850s (New York City Police Museum, 2002). Carved wooden whistles allowed an officer in need to clearly signal for help. In 1860, the "pea" whistle improved the high-pitched sound even more (New York City Police Museum, 2002). Whistles remained in use even after the advent of telegraph and electric alarm technology. In 1883, the London Metropolitan Police adopted Joseph Hudson's distinctive police whistle, which is still used today by London Bobbies (Acme Police Whistles, 2005). New York City police began using the tubular whistle in 1889. Its shrill sound could be heard up to a mile away (New York City Police Museum, 2002).

The telegraph had actually been around since the 1770s, but up to the 1840s cumbersome wiring made the system impractical for widespread use (Massachusetts Institute of Technology, 2002). In the late 1830s, American Samuel Morse and his partners improved the idea of the telegraph to a two-wire, dots-and-dashes system that was easy to use. By the early 1850s, Western Union had linked much of the nation, even before railroads did (Massachusetts Institute of Technology, 2002). Beginning in the 1850s, police departments started using the telegraph as a means to share information on fugitives and other issues with neighboring law enforcement authorities (Massachusetts Institute of Technology, 2002). Private security systems using telegraph technology also developed during this time (Berg, 1992). The Edwin Holmes Company developed the first centralized burglar alarm system for private use in 1858 (Berg, 1992). Police quickly found the usefulness of the telegraph as well. Boston installed a

telegraph alarm system in all of its watch houses and new stations beginning in 1855, giving the Boston Police Department the ability to send its reserve force anywhere in the city at a moment's notice and respond to neighborhood alerts (Lane, 1967).

The New York City Police Department began using the telegraph in the 1850s (Wadman & Allison, 2004). The New York police telegraph, a simple inefficient system compared to later improvements, provided its worth during the bloody Civil War draft riots of July 1863 (McPherson, 1988). Telegraph operators at police headquarters sent and received over give thousand messages during the four days of the riot. Most were between headquarters and precincts (McPherson, 1988). Rioters even noted the role of the telegraph, as they ripped down lines across the city to impede police response. Police commanders centered reserve forces at headquarters and then dispatched them as needed to the widespread locations of violence (Richardson, 1970).

Chicago took the advantage of telephone (Wadman & Allison, 2004). In 1880, the Chicago Police Department starts to experiment with a new police patrol and signal service – call box. Throughout Chicago weatherproof call boxes with electrical links to local police stations were placed in strategic but accessible and visible locations (Wadman & Allison, 2004). The call boxes proved a great success, and before long signal boxes and their increasingly familiar sentry box enclosures dotted the entire city of Chicago (Wadman & Allison, 2004). By the early 1890s, departments across the United States had installed signal box systems and applauded the results (Wadman & Allison, 2004).

2.2.2 Twentieth Century Police Technology in the United States

The next step was wireless communication. In 1921 the Berkeley Police Department put two-way radios in police cars for the first time (Vila & Morris, 1999). By the mid 1930s, police departments around the nation had adapted two-way radio communication for patrol cars and motorcycles. Radio certainly helped police responded to calls quicker and also allowed stations to keep an eye, or ear, on their units patrolling the streets. The two-way radio technology is still being used today as the main method of communication between officers and their central dispatch (Vila & Morris, 1999).

Hand in hand with communication advancements, the development of better transportation also changed the way police did their job (Wadman & Allison, 2004). Foot patrols were often inefficient, and even as late as the 1920s, many cities operated patrols under plans that had not changed in over fifty years, failing to take in to account the dramatic changes urbanized growth and wrought on cities across the United States (Wadman & Allison, 2004).

Walking a beat of several square blocks meant that the single foot patrolman could not be everywhere at once. Foot patrolmen were predictable and regular in their beat. All the criminal needed to do was waiting for the officer to pass and then commit the crime (Fosdick, 1969). In 1881 the Chicago Police Department started using horse and wagon to transport officers to patrol different areas eased the burden on police departments somewhat (Flinn & Wilkie, 1971). Along with improved communication,

wagons enabled police to concentrate large numbers of men at a central point to respond to larger emergency situations, such as manhunts and riots (Flinn & Wilkie, 1971).

The New York City Police Department introduced a bicycle squad in the mid-1890s (Berman, 1987). With only 29 officers, the New York Bicycle Squad made over thirteen hundred arrests in its first year of operation. Ultimately, the squad would grow to over on hundred officers who did everything from arresting drunks to chasing down runaway carriages, all on bicycles (Berman, 1987).

The automobile went furthest in solving the patrol problem. With the car, a patrol could cover more ground faster than ever before (Wadman & Allison, 2004). Kansas City and Berkeley were the first large cities to try automobiles as replacements for foot patrols (Fosdick, 1969). Berkeley Police Department made a successful switch to cars, finding that a patrol officer in a small Ford could cover one thousand street miles per month. Moreover, patrol officers in-cars could respond to calls faster, not be tired out when they arrived to the scene of the crime, and overall could perform much more effectively and efficiently (Fosdick, 1969).

Detroit Police Department put 150 Fords on former foot patrol beats in 1918. Detroit's police cruisers carried a uniformed patrol officer and a plainclothes officer and added a very visible deterrent to the streets of Detroit, so much so in fact that responses decreased by 125 during the first month of operation (Fosdick, 1969). Until today, police cars did not completely replace the beat officers in some large cities; however, as heavily congested inner city streets still favored the patrol officers on foot. Moreover,

the car isolated patrol officers from the people they once knew well as they walked their neighborhood beats (Fosdick, 1969).

Firearms are also technology, and of all the apparently obvious thing that police should have adopted earliest and without question, however the uncertain role of early police force in city politics and conflict among urban groups made an armed police force rather daunting to many urbanites of the industrial period (Chudacoff & Smith, 2000). Replacing the traditional club with revolvers and other firearms was a reluctant, reactionary move on the part of citizens and police in many cities in the United States (Chudacoff & Smith, 2000).

In Boston, watchmen and patrolmen had only carried rattles for alarm and rarely had to use these as weapons to defend themselves, or, as occasionally happened, the people they were apprehending would take the rattle and use it against the officer (Wadman & Allison, 2004). At the end of 1850s, many officers began carrying revolvers, even though they had no official authority to do so (Lane, 1967). What grew out of unauthorized habit became accepted practice, mainly because there was simply no other way to deal with rowdy, armed criminals (Johnson, 1981).

The Boston draft riot of 1863, indicative of draft riots across the North America, the most violent of which took place in New York City, changed the gun policy (Johnson, 1981). Boston police were not armed when the riot began on July 14, 1863. As usual, the riot began small enough, but quickly expanded as mob mentality took over. A patrolman was nearly killed when he attempted to intervene. Mostly unarmed police stopped the crowd with clubs (Johnson, 1981). In response to the police

disadvantage during the riot, the Massachusetts assembly granted police the authority to carry firearms later in 1863 (Lane, 1967). From this point on, the image of Boston police as drunken, lazy watchmen disappeared (Lane, 1967). By 1884, more than 800 Smith and Wesson .38 caliber revolvers were purchased and kept at stations to be checked out when on patrol (Lane, 1967).

New City Police had not authorized a standard revolver until the Roosevelt Board adopted the .32 caliber Colt revolver in 1890s (Richardson, 1970). Other cities also finally came around to adopting side arms as standard issue for police officers by the same time (Richardson, 1970). The 1920s and 1930s represent the full coming over of police to the use of firearms. Revolvers remained the weapon of economic if not practical choice (Walker 1977). Police relied upon revolvers for everyday use and only rarely turned to automatic weapons to chase down criminals all the way until the late 20th century (Ellis, 1986).

Police departments in the United States adopted the modern science of criminalistics, a European innovation developed in the 1880s. This new approach to crime fighting involved using science and scientific methods to detect and analyze clues and solve crimes (Wadman & Allison, 2004).

Photography was one of the earliest technological developments to impact police work (Richardson, 1970). By the Civil War, daguerreotype photography enabled police to create rogues' galleries. New York Police Department created a rogues' gallery in 1857 and within eight months the collection had grown to over 700 photographs (Richardson, 1970). Boston Police Department took up the practice in

1862. Other police departments using photographs during this time included those of Philadelphia and Chicago (Richardson, 1970).

Police recognized that galleries of known criminals were helpful but limited. What was needed was a system of recognizing criminals before they committed the crime (Wadman & Allison, 2004). French criminologist Alphonese Bertillon made the first great advancement in the new field of criminalistics (Wadman & Allison, 2004). Bertillon developed a system whereby criminals could be identified through unique physical characteristics. Using body measurements, distinguishing characteristics such as scars, photographs, and upon its development, fingerprint technology, Bertillon created a standardized system for identifying criminals and repeat offenders (Wadman & Allison, 2004). In essence, Bertillon began what would become the modern police crime laboratory.

Typical of the medical and psychological vogue of the time, the Bertillon system became widely popular in both Europe and the United States (Foster, 2005). The Chicago Police Department was the first to sue the Bertillon identification system in 1888. New York City Police Department began using the Bertillon identification system under the Roosevelt Board but quickly turned to new fingerprint technology as a means to identify people (Richardson, 1970).

Fingerprint technology proved much more reliable than the increasing fallible Bertillon system (Wadman & Allison, 2004). It was developed by amateur English scientists Dr. Henry Faulds and Sir William Herschel, who both used what they at first considered a novelty to successfully identify criminals in the 1870s and early 1880s

(Foster, 2005). Police in the United States hesitated to latch on to European success with fingerprinting. St. Louis became the first city to have its own fingerprint agency after police leaders there witnessed a demonstration of the technology at the 1904 St. Louis World's Fair (Johnson, 1981). While it was technically possible for a fingerprint examiner to compare a latent print with all of those already on file, the millions of ten-print cards stored by the FBI, state criminal records repositories and local agencies often made this task impractical (Dees, 2003). A system, which came to be known as the Automated Fingerprint Identification System (AFIS) was developed to be able to compare a latent print to as large a sample as desired in the 1980s. AFIS is widely used today in every level of law enforcement agencies (Dees, 2003).

Microscopes (used to identify hair and blood) were commercially available in the 1860s but were scarcely used by police and detectives (Lane, 1967). By the early 1900s, police began to see the light and utilized microscopes and other scientific instruments in their investigations (Lane, 1967). Los Angeles established the first police crime laboratory in the United States in 1923 (Richardson, 1970). This significant development centralized evidence analysis and other tasks under one roof with trained criminologists.

The science of DNA was born in 1953, when Franklin, Watson and Crick identified the DNA double helix molecule, for which they received the Nobel Prize in Medicine in 1962 (Dees, 2003). Forensic use of DNA evidence was developed in 1985 by Alex Jeffreys, and was used for the first time in a criminal investigation in England, ironically to exonerate a man accused of a brutal rape and murder (Dees, 2003).

The boom of technological growth for police waned in the late 1940s and continued to decline through World War II (Wadman & Allison, 2004). President Lyndon Johnson's 1967 Crime Commission report criticized police agencies for failing to keep pace with the remarkable advances in science and technology since World War II. The commission's report recommended that the federal government assist local law enforcement in advancing the use of science and technology by supporting research and development for the 911 emergency telephone system and the use of computers (Wadman & Allison, 2004).

The idea of a single telephone number that could be used nationwide to report emergencies had been around since the early 1960s (National Institute Of Justice, 1998). AT&T unveiled the 911 system in 1968, and after several successful pilot programs, many urban areas adapted the system (National Institute Of Justice, 1998). The first ten years of the system proved invaluable, perhaps too much so for some police departments, as the number of calls and the tendency among citizens to use the system for non-emergency calls increased dramatically because of the convenience of the system. By the 1990s, over 95 percent of police departments in the United States used the 911 system (National Institute Of Justice, 1998).

Computers came to police toughly the same time as did the 911 system and, in fact made the 911 system possible (National Institute Of Justice, 1998). Developed during and after World War II for code breaking, computer technology advanced rapidly in the 1960s through private enterprise IBM and federal programs mainly from the Defense Department and NASA (Wadman & Allison, 2004). By 1993, two-thirds of

police departments across the United States made use of computers. The National Crime Information Center (NCIC), the Automated Fingerprint Identification System (AFIS), and the 911 system were all possible because of police adapting to computer technology (National Institute Of Justice, 1998).

Police and technology now go hand in hand. Technological advances in communication, transportation, criminalistics, and other areas combined with the police's use of science and scientific methods gave the public an image of the police as leaders of progress (Green, 2003).

2.3 In-car Mobile Video System

In 1953 about the only way to record an event and preserve full motion images was to film it. Even though television had been around since the 1940s, the only way to preserve a television performance was to point a movie camera at a TV screen and record the output, this is why replays of old television programs lack the crispness of those recorded on videotape (Dees, 2003). In 1956, Ray Dolby and Charles Ginsburg invented the first commercial videotape recorder for the Ampex Corporation (Dees, 2003).

Early Video Cassette Recorders (VCRs) were massive devices, and their size and power requirements made them unsuited for mobile use (Dees, 2003). The first videotape recording systems became available in the early 1960s. However, video technology of the 60's was not conducive to the mounting of cameras in police vehicles (Rosenblatt et al. 2004). In the late 1960s, the Connecticut State Police installed a video camera and recorder in a patrol car. The camera was on a small tripod that required the

full passenger side of the front seat with the back seat fully loaded with a recorder and cables that connected the two devices. While the equipment was far too cumbersome to make it practical for routine use in patrol vehicles, this experiment illustrated that video recording could play an important role in patrol operations (Rosenblatt et al. 2004). Sony marketed a more affordable and smaller VCR in 1969, and by the early 1980s home video recorders were commonplace (Dees, 2003).

A few prescient law enforcement administrators saw the value of placing camcorders in patrol cars to document the actions of officers in the field, but the infamous Rodney King incident caused this market segment to take off (Rosenblatt et al. 2004). In early 1980s the self-contained Beta audio/visual recording system was introduced and revolutionized the recording industry (Dees, 2003). The next step in the evolution of the mobile video recorder was the introduction of the VHS recorder and tape, followed by the introduction of 8mm camcorders (Rosenblatt et al. 2004).

In 1980s, Mothers Against Drunk Drivers (MADD) was formed and brought a heightened awareness to the national problem of drinking and driving (Mothers Against Drunk Drivers, 2005). During the same period much greater emphasis was placed on convictions and punishment, particularly among prosecutors. The police began installing cameras in police vehicles to document the infractions leading up to the initial stop and the eventual field sobriety test (Rosenblatt et al. 2004). These recordings came to be viewed as the most effective method of providing the necessary evidence to support a conviction. MADD recognized the value of the in-car mobile video system and began purchasing systems for police agencies involved in detecting and

apprehending driving while impaired or under the influence of alcohol and drugs violators (Mothers Against Drunk Drivers, 2005).

Law enforcement administrators saw the potential benefits of video technology for restoring public confidence might weigh heavily at this time, as a number of highly publicized incidents occurred since the 1980s in the United States have shaken public confidence in the police in some regions of the states (Maghan et al., 2002). Police car video technology might have resolved questions and restored public confidence in incidents such as the deaths of innocent civilians killed during high speed pursuit collisions, the fatal shootings by Chicago police officers of LaTanya Haggerty and former Northwestern football player Robert Russ after traffic stops, and allegations of racial profiling in traffic stops in Highland Park and Mount Prospect (Maghan et al., 2002).

Law enforcement agencies in many states have implemented in-car mobile video programs since 1990s (Maghan et al., 2002). For instance, prompted by the police shooting deaths of two civilians, the Kansas City, Missouri, Police Department has been using two video cameras since April 1999 as part of a pilot project (Garcia, 1999). The cameras are rotated through each of the department's five divisions for six to eight weeks. After the project ends, the department decided to purchase 50 cameras, one for each of its marked cars (Garcia, 1999).

On a larger scale, in Los Angeles in 1999, the city council's Public Safety Committee approved a plan for squad car video cameras, referred to as in-car mobile video (Los Angeles Icv Audit, 1995). The in-car mobile video systems were deployed

throughout the 18 areas and four traffic divisions of Los Angeles. According to an audit of the program, its purposes were to get an accurate visual and audio record of enforcement related activates to enhance criminal prosecution, limit police liability, and reduce personnel complaints. In addition, the program was aimed at assisting officer training to augment the patrol function, and to assist and complement officers in the performance of their duties (Los Angeles Icv Audit, 1995).

The program has not been without its difficulties. The vendor who provided the cameras went out of business; the cameras began to malfunction and could not be adequately serviced. By the end of 2000, the Los Angeles Police Department was unable to operate their first run of cameras and was seeking bids from new vendors to outfit 60 patrol vehicles (Roug, 2000).

Following after the Los Angeles Police Department, the Illinois State Police installed 200 in-car mobile video system in their police vehicles (Keoun, 2000). McChoppin (1999) write through the use of squad car video technology, officers have gathered evidence of guilt that they have provided to prosecutors for use in court. The primary use of in-car mobile video has been for training and supervisors review the tapes of stops and tell officers how they can improve (McChoppin, 1999).

On January 23, 1991 on State Highway 59 in Garrison, Texas, Constable Darrell Lunsford of the Nacogdoches County Constable's Office, was shot and killed while conducting a traffic stop. During the traffic stop, Constable Lunsford found Marijuana in the trunk of the vehicle and discovered that the occupants of the vehicle were transporting Marijuana. The three occupants that were stopped on traffic attacked

Constable Lunsford, shot the Constable with his own service pistol, and left him dead on the side of the road. This horrific killing was video taped by the in-car mobile video system installed in Constable Lunsford's patrol vehicle. Because of the video tape, all three suspects were later arrested, tried and convicted of the murder of Constable Lunsford. Constable Lunsford became the first police officer whose murder was fully documented on video tape (In The Line Of Duty, 2005).

Before any program got started, many agencies contend with internal resistance. According to the Los Angeles ICV Audit (1995), despite being told that the cameras were installed for their benefit, many officers retained an attitude that its purpose was to spy on them. As the program got under way, many officers adopted a paranoid "big brother is watching" attitude and believed the program showed a lack of faith in the street officers (Los Angeles Icv Audit, 1995). To overcome resistance, the Los Angeles Police Department instituted a mobile video training program. The officers who received training seemed less resistant to the in-car mobile video system and appreciated its value that it provides an accurate and unbiased account of patrol incidents, often captures evidence successfully used in prosecution, refutes allegations of misconduct, and can be used as a training aid (Los Angeles Icv Audit, 1995).

By 1999, allegations of racial bias or racial profiling were being lodged against police agencies across the United States. State police agencies, by virtue of their primary traffic responsibilities, found themselves in the center of controversy with complaints of racial profiling. At the same time, assaults on officers were on the increase (Westphal, 2004). Responding to these concerns, state and federal legislative

bodies began enacting laws requiring all police agencies within their jurisdiction to document details of every traffic stop (Rosenblatt et al. 2004). The Department of Justice, Office of Community Oriented Policing Services recognized the value of the in-car mobile video in addressing officer safety issues and allegations of racial profiling while enhancing the public trust. Between 2000 and 2003, the Office of Community Oriented Policing Services awarded over $21 million to state agencies for the purchases and support of in-car cameras. The number of state police vehicles equipped with in-car mobile video system grew to 17,500 compare to 3,400 in 2000; this number representing 72% of total state patrol vehicles (Rosenblatt et al. 2004).

The promise of in-car mobile video technology cannot be ignored in today's policing in The United States. Video technology could deter abuses by officers, limit frivolous complaints against officers about alleged abuses, and help restore confidence in the fairness of police departments. It could also provide evidence of crimes or attacks against officers, streamline the truth-finding process by providing the best evidence, and encourage the humane treatment of suspects and fairness and respect for civil rights and liberties (Maghan et al., 2002).

The immediate challenge for police departments will be to overcome institutional resistance and operational difficulties and to integrate this new technology with other technological tools available to their patrol officers (Westphal, 2004). Successful in-car mobile video implementation is also contingent on how well departments train their officers in the use and the benefits of the new video system (Rosenblatt et al. 2004).

In the next subchapter, the author will review case laws pertain to the police use of videotaping technology and in-car mobile video system.

2.4 Case Laws

2.4.1 English v. The State, 422 S.E.2d 924 (1992)

The defendant's sales of cocaine were secretly videotaped by the undercover agent who made the purchases. From the master tape for the sales, a copy was then made wherein all irrelevant material was deleted. The videotape copy was then further edited so as to freeze those frames wherein the image of the seller appeared. The frozen frames on the videotape copy were then subjected to computer enhancement and a single photographic depiction of the seller, as enhanced, was produced. At trial, the copy of the master videotape containing the frozen frames and the single computer enhanced photographic copy of the seller were introduced into evidence (LexisNexis Academic, 1992).

On appeal, the defendant enumerates as error the admission of the computer enhanced photographic copy. During the trail, the technician who produced the computer enhanced photographic copy testified to that process and further testified that, in his opinion, the photographic copy, as enhanced, was a fair and accurate representation of what appeared in the frozen frames of the videotape copy. The court allowed the computer enhanced frozen frame videotape copy into evidence after the technician's testimony (LexisNexis Academic, 1992).

The legal reasoning of English v. The State would seem applicable to computer enhanced images done as a copy of in-car mobile video recording and not as alteration to the original in-car mobile video recording (Kuboviak, 2004).

2.4.2 United States v. Beeler, 62 F. Supp. 2d 136 (1999)

Defendant, Coleman Beeler, faces charges of malicious damage of a vehicle by means of explosive materials and aiding and abetting, possession of an unregistered firearm and aiding and abetting, use of explosive materials to collect extensions of credit by extortionate means and aiding and abetting. The defendant motioned to suppress an in-court identification of the defendant by a witness Michael Sawn, DNA evidence, and edited and enhanced versions of a surveillance videotape taken at a Mobil Mini-Mart in Yarmouth, Maine (LexisNexis Academic, 1999).

During Beeler's trial, although he does not object to the admission of the original surveillance videotape from the Mobil Mini-Mart, defendant seek to have the edited and enhanced copies of the surveillance videotape excluded at trial. Defendant seeks to suppress the copies on two grounds. First, a copy is inadmissible pursuant to the best evidence rule; and second, that the copies are untrustworthy because they are susceptible to tampering and subtle modification through enhancement (LexisNexis Academic, 1999).

At the evidentiary hearing, the court had the opportunity to view the original and its duplicated copies of the Mini-Mart surveillance videotape and find that all tapes depicted the same images. A visual enhancement expert-testified that the original Mobil Mini-Mart surveillance tape was made on a time lapse recorder and is best viewed on a

time lapse player. The expert explained that to produce the enhanced version, he copied certain specific frames from the original tape to a computer and, using a computer program called Image Lab, enhanced the quality of those images by adjusting the contrast and brightness of those images and enlarging portions of the still frames that depict the suspect. The expert-testified that he did not modify the actual images but only added shading so that the images could be seen better (LexisNexis Academic, 1999).

After hearing the testimony of the expert regarding the techniques of video enhancement, the Court was satisfied that the enhanced version of the videotape is an accurate representation of the images portrayed in the original surveillance videotape. The defendant brought no evidence forward at the trial showing the tape to be inaccurate. The Court denied the defendant's motion to suppress the enhanced version of the video tape (LexisNexis Academic, 1999).

This case indicated any changes to a digital recording for enhancement purposes should not be done on the original, so it may be reviewed by the court and comparisons are done between the original and the enhanced versions (Kuboviak, 2004).

2.4.3 Ralph Chissell v. State of Indiana, 705 N.E.2d 501 (1999)

Following a jury trial, Ralph E. Chissell was convicted of Operating a Motor Vehicle While Intoxicated, a class A misdemeanor; Operating a Motor Vehicle With a Blood Alcohol Level of .10 Percent or Greater, a class C misdemeanor; and Public Intoxication, a class B misdemeanor. The court enhanced Chissell's conviction for Operating a Motor Vehicle While Intoxicated to a class D felony based upon a prior conviction and sentenced Chissell to one and one-half years, with all but sixty days

suspended to probation. The court withheld judgment on the Public Intoxication and Operating a Motor Vehicle with a Blood Alcohol Level of .10 Percent or Greater convictions (LexisNexis Academic, 1999).

Chissell appealed and brought the issue that his conviction should be reversed due to the State's failure to preserve videotapes of the police administering sobriety tests to him. Chissell argued that the State's loss or destruction of allegedly material evidence impaired his rights to a fair trial and due process of law. In particular, Chissell asserts that he was "substantially prejudiced" because the State did not preserve police videotapes of him performing sobriety tests both at the scene and at the jail (LexisNexis Academic, 1999).

The court held that the loss or destroyed videotape of the defendant performing field sobriety tests at the traffic stop were not material exculpable because there was no indication that the videotape would have depicted the defendant passing the tests. Because the defendant did not demonstrate bad faith, the court rejected his claim that the destruction of the videotape violated the defendant's right to due process (LexisNexis Academic, 1999).

This case pertains to a malfunctioning mobile videotape equipment in the field and loss of the police station videotape made at the police station. This is an important case for mobile videotaping and the possible loss of the videotape and its effect on the trial (Kuboviak, 2004).

2.4.4 Freddie Lee Clark v. The State of Texas, 728 S.W.2d 484 (1987)

Freddie Lee Clark appeals his conviction by a jury of the offense of aggravated sexual assault. The jury assessed his punishment, enhanced by two prior felony convictions, at life imprisonment in the Texas Department of Corrections. During Clark's appeal, he raises the issue that the videotape was not admissible into evidence because the tape was not made by a technician competent in the operation of electronic video recorders (LexisNexis Academic, 1987).

The opinion of this case was issued by Judge John G. Hill. The Court gave the opinion that admissibility of videotapes into evidence must meet the same standards of reliability and accuracy as other sound recordings (LexisNexis Academic, 1987).

During the trial, the videotape operator testified that he was an eight-year police officer, with a specialization in child sexual and physical assault cases. As a part of his job, he videotaped about twenty to thirty child victims per month. The videotape operator testified that the videotape equipment he used to interview the victim in this case was competent and accurate. Although he has had no special training for operating video equipment, the video operator testified that he had reviewed the basic operating procedures for the equipment when his office received the equipment about three years ago, and that he was familiar with the operating instructions. After reviewing the video operator's testimony, the court held it supported the inference that the video operator was competent to operate the videotape equipment (LexisNexis Academic, 1987).

This case stood for the proposition that there is not a need for specialized training on the use of videotaped equipment. Unlike the Standardized Field Sobriety

Testing where officers have to do it the way taught or the test would be invalid (Kuboviak, 2004).

It is clear from the aforementioned literature review that majority of the researches were focused on the history of policing in the United States, the development of police technology and the development of in-car mobile video system. However no researches were found focusing on officers' education and experience as they relate to police officers' perceptions toward the use of in-car mobile video system. Therefore, the purpose of this study is to examine police officers' perceptions on the use of in-car mobile video system and attempts to ascertain if police officers have a pattern of response based on their education and their experience.

In the next chapter the author will discuss the methodology that was used in order to perform this study.

CHAPTER 3

METHODOLOGY

3.1 Design

A non-experimental, one-shot survey design consisting of a single observation was utilized in the study. It is felt that this particular design is the most appropriate one to implement given the specific nature of this study.

3.2 Population

The Dallas - Fort Worth (DFW) Metroplex is made up of 315 cities (U.S. Census Bureau, 2000). Of these cities, they are complex and unique from one and another in term of demographics. Each city within the DFW Metroplex also has a different type of police department, and different philosophy within each police department. Therefore the DFW Metroplex serves as a unique place to conduct this research because of the variety of police departments that existed.

Majority of the studies related to the police use of in-car mobile video system that the author discussed in the literature review were conducted on large size police departments or state highway patrol agencies. The author felt that smaller police departments have unique characteristics that would be particularly insightful when conducting this study. Therefore three police department within the DFW Metroplex

were chosen for this study. The three police departments that were selected represent the setting of typical smaller size police departments that have around 30 commissioned police officers. The three police departments that participated in the study are the City of Saginaw Police Department, the City of Watauga Department of Public Safety, and the City of Lake Worth Police Department. All three agencies have a similar number of commissioned police officers and serve a similar size of permanent residential population. Furthermore, all three agencies are equipped with in-car mobile video system in their patrol vehicles. At the time of the survey, The City of Saginaw Police Department had 33 commissioned police officers, the City of Watauga Department of Public Safety had total of 29 commissioned police officers, and the City of Lake Worth Police Department had 31 full time commissioned police officers.

The City of Saginaw Police Department serves a city whose permanent residential population in the year 2005 was estimated to be 17,510 (City Of Saginaw, 2005). The City of Watauga Department of Public Safety serves a city whose permanent residential population in 2005 was estimated to be 23,973 (City Of Watauga, 2005). The City of Lake Worth has a permanent residential population of 5,207. With two new shopping centers in Lake Worth and more than 700,000 square feet of new retail space under construction, the City of Lake Worth is one of the fastest growing commercial areas for its size in Tarrant County, Texas (City Of Lake Worth, 2006).

3.3 Data

There were a total of 27 questions in the survey. The author felt that it was appropriate to ask these questions based on the literature review of previous studies

done on police technology and police use of in- car mobile video system. The first part of the survey consist 20 questions aimed at measuring the officers' perceptions on the implementation of in-car mobile video system. The second part of the survey included seven questions regarding demographic information. The survey was designed to measure police officers' perceptions on the use of in-car mobile video system. The statements on the survey were uniform in appearance an answered using the five-point Likert Scale so that the data would be more easily analyzed in the Statistical Package for the Social Sciences (SPSS) software.

3.4 Procedures

Prior to the implementation of the study, the survey was approved by the University of Texas at Arlington Office of Research Integrity and Compliance. Written approvals to conduct the study were also received from the chiefs of police of all three agencies that participated in the study.

A self-administered survey was distributed during all police briefings throughout the City of Saginaw Police Department, the City of Watauga Department of Public Safety, and the City of Lake Worth Police Department during a 14-day period. The survey was dispensed to a census of 93 commissioned police officers in these three police departments.

A survey instrument was implemented by listing every element of the population and distributing surveys to each member of the three police departments for quantitative analysis purposes. This type of survey was employed because it is versatile, allowing for closed ended questions. Sixty-two officers replied to the survey for a 67%

response rate. The officers who chose to engage in the survey were advised of their rights in reference to the survey. Each survey contained a written explanation of these rights and they were conveyed verbally, as well. Each officer was notified that the conclusions drawn from their responses would be preserved anonymously and that involvement was voluntary. It took each officer less than ten minutes on average to complete the survey. No participants had questions concerning how to answer the survey. Once the officers had completed the survey, the surveys were returned in a sealed envelope in order to ensure officers' anonymity.

3.5 Analysis

After the survey data collection, the data were inputted into SPSS for statistical analysis. These data were analyzed using a variety of statistics. Descriptive statistics were produced by SPSS and their means were compared. A t-test was used to determine if the scores of two groups differed on a single variable. The t-test determined whether or not there were any statistically significant differences among the means of compared variables. Comparisons were analyzed to determine the variations in the perceptions of in-car mobile video system among officers.

CHAPTER 4

FINDINGS

The author felt that it was most appropriate to select one-sample t-test for the purpose of this study given the fact that a one-sample t-test compares the means of two groups and the data utilized in the study was five-point Likert Scale data. A t-test is a special case of analysis of variance that compares the means of only tow groups (Sweet & Grace-Martin, 2003). A one-sample t-test is used to compare a sample mean to a given value. In this study, a one-sample t-test was used to analyze the statistical differences in survey responses between officers without a bachelor's degree and officers with at least a bachelor's degree, as well as between officers with less than six years of law enforcement experience and officers with six and more years of law enforcement experience. The participants of this study specified their level of agreement of the survey by choosing from a five-point Likert Scale ranging from agree strongly (1) to disagree strongly (5).

4.1 Demographics

As stated in Chapter Three, the study consisted of 62 respondents. As illustrated in Table 1, 53 respondents in this study were male (85.5%) and nine respondents were female (14.5%). Out of the 62 respondents, 14 respondents were between the ages of 21

and 30 (22.5%), 20 respondents were between the ages of 31 and 40 (32.3%). Respondents between the ages of 41 and 50 totaled 17 (27.4). Eleven or 17.7% of the respondents were fifty-one or older. The ethnic classification of the participants included: Two African American (3.2%), 55 Caucasians (88.7%), four Hispanics (6.5%), and one or 1.6% listed as "other."

The respondents' assignments amounted to: 40 uniformed patrol officers (64.5%), ten criminal investigators (16.1%), one traffic officer (1.6%), five specialized unit (SRO, Crime Analysis, etc.) officers (8.1%), and six administration personnel (9.7%). Forty-two participants (67.8%) indicated their ranking as police officer (including Corporal/FTO), 14 or 22.6% of the participants were Sergeants, three Lieutenants (4.8%), and three chiefs (4.8%). Eight participants indicated they have an undergraduate degree (12.9%); and another eight participants attained a two-year degree (12.9%). Thirty-seven participants indicated they have received some college education (59.7%) and nine participants received a high school diploma/G.E.D. (14.5%).

Table 1. Demographics

Statement	Percentage of Participants
Female	14.5
Male	85.5
Under age 30	22.5
Age between 31-40	32.3
Age between 41-50	27.4
Age 51 or above	17.7
African American	3.2
Caucasian	88.7
Hispanic	6.5
Asian, Native American, or Other	1.6
High School Diploma/G.E.D.	14.5
Some college	59.7
Two year degree	12.9
Four year degree	12.9
0-2 years experience	16.1
3-5 years experience	12.9
6-10 years experience	17.7
11-20 years experience	37.1
21 or more years experience	16.1
Uniformed Patrol	64.5
Criminal Investigation	16.1
Traffic	1.6
Specialized Division	8.1
Administration	9.7
Police Officer	59.7
Corporal/FTO	8.1
Sergeant	22.6
Lieutenant	4.8
Deputy Chief or Above	4.8
Day Shift	69.4
Evening Shift	6.5
Midnight Shift	22.6
Swing Shift	1.6

*Percentages may not total 100% due to surveys with incomplete responses.

4.2 T-test Comparisons of officers with and without a bachelor's degree

The t-test comparisons of 14 variables between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree were conducted. Table 2 illustrated a list of p-values for these variables.

The mean value for the question "With the help of in-car video system more allegations of misconduct against officers were exonerated or unfounded" for officers who did not have a bachelor's degree was 1.76, while the means for officers who had at least a bachelor's degree was 1.63. When performing a t-test on these two means, a p-value of 0.625 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

With regards to the question, "The use of in-car mobile video system ensures that my interactions with citizens are handled in a professional manner," the mean value for officers who did not have a bachelor's degree was 2.11, while the means for officers who had at least a bachelor's degree was 2.13. When performing a t-test on these two means, a p-value of 0.978 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

When asked, "The use of in-car mobile video system has assisted supervisors in overseeing officers' professional conduct," the mean value for officers who did not have a bachelor's degree was 2.07, while the means for officers who had at least a bachelor's degree was 1.75. When performing a t-test on these two means, a p-value of

0.236 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

The mean value for the question "The use of in-car mobile video system has made officers' citizen contacts more transparent before the community" for officers who did not have a bachelor's degree was 2.57, while the means for officers who had at least a bachelor's degree was 2.88. When performing a t-test on these two means, a p-value of 0.611 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

When asked, "The presence of in-car mobile video system has improved my professional demeanor during citizen contacts," the mean value for officers who did not have a bachelor's degree was 3.06, while the means for officers who had at least a bachelor's degree was 4.00. When performing a t-test on these two means, a p-value of 0.061 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

With regards to the question "The presence of in-car mobile video system affects the behavior of citizens when interacting with police officers," the mean value for officers who did not have a bachelor's degree was 3.64, while the means for officers who had at least a bachelor's degree was 3.75. When performing a t-test on these two means, a p-value of 0.842 was produced. Therefore, the difference of opinions between

officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

When asked, "The use of in-car mobile video system has improved my job satisfaction," the mean value for officers who did not have a bachelor's degree was 3.06, while the means for officers who had at least a bachelor's degree was 3.88. When performing a t-test on these two means, a p-value of 0.028 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was in fact statistically significant.

The mean value for the question "The presence of in-car mobile video system affects my decision when contemplating use of force" for officers who did not have a bachelor's degree was 4.00, while the means for officers who had at least a bachelor's degree was 4.38. When performing a t-test on these two means, a p-value of 0.351 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

When asked, "The use of in-car mobile video system promotes officer safety," the mean value for officers who did not have a bachelor's degree was 3.04, while the means for officers who had at least a bachelor's degree was 2.63. When performing a t-test on these two means, a p-value of 0.243 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

The mean value for the question "I am proficient in the operation of in-car mobile video system" for officers who did not have a bachelor's degree was 1.81, while the means for officers who had at least a bachelor's degree was 2.13. When performing a t-test on these two means, a p-value of 0.318 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

With regards to the question, "The use of the mobile video system has improved my overall job performance as a police officer," the mean value for officers who did not have a bachelor's degree was 3.34, while the means for officers who had at least a bachelor's degree was 3.63. When performing a t-test on these two means, a p-value of 0.314 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

The mean value for the question "The use of the mobile video system enhances the public trust towards the police officers" for officers who did not have a bachelor's degree was 3.15, while the means for officers who had at least a bachelor's degree was 3.63. When performing a t-test on these two means, a p-value of 0.244 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

With regards to the question "The use of the mobile video system improves officer training," the mean value for officers who did not have a bachelor's degree was 1.91, while the means for officers who had at least a bachelor's degree was 2.38. When

performing a t-test on these two means, a p-value of 0.409 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

When asked, "I review my own videos for the purpose of self assessment," the mean value for officers who did not have a bachelor's degree was 3.08, while the means for officers who had at least a bachelor's degree was 3.25. When performing a t-test on these two means, a p-value of 0.712 was produced. Therefore, the difference of opinions between officers who did not have a bachelor's degree and officers who had at least a bachelor's degree was not statistically significant.

Table 2. T-test Comparisons of officers with and without a bachelor's degree

Questions	P-Values
With the help of in-car video system more allegations of misconduct against officers were exonerated or unfounded	.625
The use of in-car mobile video system ensures that my interactions with citizens are handled in a professional manner	.978
The use of in-car mobile video system has assisted supervisors in overseeing officers' professional conduct	.236
The use of in-car mobile video system has made officers' citizen contacts more transparent before the community	.611
The presence of in-car mobile video system has improved my professional demeanor during citizen contacts	.061
The presence of in-car mobile video system affects the behavior of citizens when interacting with police officers	.842
The use of in-car mobile video system has improved my job satisfaction	**.028****
The presence of in-car mobile video system affects my decision when contemplating use of force	.351
The use of in-car mobile video system promotes officer safety	.243
I am proficient in the operation of in-car mobile video system	.318
The use of the mobile video system has improved my overall job performance as a police officer	.314
The use of the mobile video system enhances the public trust towards the police officers	.244
The use of the mobile video system improves officer training	.409
I review my own videos for the purpose of self assessment	.712

**Statistically significant at the 0.05 confidence level.

4.3 T-test Comparisons between officers with less than six years of police experience and officers with six or more years of police experience

The t-test comparisons of 14 variables between officers with less than six years of police experience and officers with six or more years of police experience were conducted. Table 3 illustrated a list of p-values for these variables.

The mean value for the question "With the help of in-car video system more allegations of misconduct against officers were exonerated or unfounded" for officers with less than six years of police experience was 1.83, while the means for officers with six or more years of police experience was 1.70. When performing a t-test on these two means, a p-value of 0.289 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was not statistically significant.

With regards to the question, "The use of in-car mobile video system ensures that my interactions with citizens are handled in a professional manner," the mean value for officers with less than six years of police experience was 1.89, while the means for officers with six or more years of police experience was 2.20. When performing a t-test on these two means, a p-value of 0.043 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was in fact statistically significant.

When asked, "The use of in-car mobile video system has assisted supervisors in overseeing officers' professional conduct," the mean value for officers with less than six years of police experience was 1.83, while the means for officers with six or more years of police experience was 2.11. When performing a t-test on these two means, a p-

value of 0.044 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was in fact statistically significant.

The mean value for the question "The use of in-car mobile video system has made officers' citizen contacts more transparent before the community" for officers with less than six years of police experience was 2.44, while the means for officers with six or more years of police experience was 2.67. When performing a t-test on these two means, a p-value of 0.108 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was not statistically significant.

With regards to the question, "The presence of in-car mobile video system has improved my professional demeanor during citizen contacts," the mean value for officers with less than six years of police experience was 3.00, while the means for officers with six or more years of police experience was 3.26. When performing a t-test on these two means, a p-value of 0.168 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was not statistically significant.

When asked, "The presence of in-car mobile video system affects the behavior of citizens when interacting with police officers," the mean value for officers with less than six years of police experience was 3.78, while the means for officers with six or more years of police experience was 3.60. When performing a t-test on these two means, a p-value of 0.264 was produced. Therefore, the difference of opinions between

officers with less than six years of police experience and officers with six or more years of police experience was not statistically significant.

When asked, "The use of in-car mobile video system has improved my job satisfaction," the mean value for officers with less than six years of police experience was 3.00, while the means for officers with six or more years of police experience was 3.23. When performing a t-test on these two means, a p-value of 0.133 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was not statistically significant.

The mean value for the question "The presence of in-car mobile video system affects my decision when contemplating use of force" for officers with less than six years of police experience was 3.61, while the means for officers with six or more years of police experience was 4.23. When performing a t-test on these two means, a p-value of 0.001 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was in fact statistically significant.

With regards to the question, "The use of in-car mobile video system promotes officer safety," the mean value for officers with less than six years of police experience was 2.50, while the means for officers with six or more years of police experience was 3.18. When performing a t-test on these two means, a p-value of 0.001 was produced. Therefore, the difference of opinions between officers with less than six years of police

experience and officers with six or more years of police experience was in fact statistically significant.

The mean value for the question "I am proficient in the operation of in-car mobile video system" for officers with less than six years of police experience was 1.67, while the means for officers with six or more years of police experience was 1.93. When performing a t-test on these two means, a p-value of 0.135 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was not statistically significant.

When asked, "The use of the mobile video system has improved my overall job performance as a police officer," the mean value for officers with less than six years of police experience was 3.17, while the means for officers with six or more years of police experience was 3.47. When performing a t-test on these two means, a p-value of 0.059 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was not statistically significant.

The mean value for the question "The use of the mobile video system enhances the public trust towards the police officers" for officers with less than six years of police experience was 3.22, while the means for officers with six or more years of police experience was 3.20. When performing a t-test on these two means, a p-value of 0.910 was produced. Therefore, the difference of opinions between officers with less than six

years of police experience and officers with six or more years of police experience was not statistically significant.

With regards to the question "The use of the mobile video system improves officer training," the mean value for officers with less than six years of police experience was 1.67, while the means for officers with six or more years of police experience was 2.09. When performing a t-test on these two means, a p-value of 0.005 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was in fact statistically significant.

When asked, "I review my own videos for the purpose of self assessment," the mean value for officers with less than six years of police experience was 2.94, while the means for officers with six or more years of police experience was 3.16. When performing a t-test on these two means, a p-value of 0.259 was produced. Therefore, the difference of opinions between officers with less than six years of police experience and officers with six or more years of police experience was not statistically significant.

Table 3. T-test Comparisons between officers with less than six years of police experience and officers with six or more years of police experience

Questions	P-Values
With the help of in-car video system more allegations of misconduct against officers were exonerated or unfounded	.289
The use of in-car mobile video system ensures that my interactions with citizens are handled in a professional manner	**.043***
The use of in-car mobile video system has assisted supervisors in overseeing officers' professional conduct	**.044***
The use of in-car mobile video system has made officers' citizen contacts more transparent before the community	.108
The presence of in-car mobile video system has improved my professional demeanor during citizen contacts	.168
The presence of in-car mobile video system affects the behavior of citizens when interacting with police officers	.264
The use of in-car mobile video system has improved my job satisfaction	.133
The presence of in-car mobile video system affects my decision when contemplating use of force	**.001****
The use of in-car mobile video system promotes officer safety	**.001****
I am proficient in the operation of in-car mobile video system	.135
The use of the mobile video system has improved my overall job performance as a police officer	.059
The use of the mobile video system enhances the public trust towards the police officers	.910
The use of the mobile video system improves officer training	**.005****
I review my own videos for the purpose of self assessment	.259

*Statistically significant at the 0.05 confidence level.
** Statistically significant at the 0.01 confidence level.

CHAPTER 5

DISCUSSION

In this chapter, the author will discuss the findings as relate to education and police experience of police officers with regards to the aim. The purpose of this research is to determine police officers' perceptions on the use of in-car mobile video system. The study also attempts to ascertain if officers have a pattern of response based on their education level and their police experience. In hopes of attaining the goal of this study, the perceptions of police officers were measured through the implementation of a survey instrument administered in the City of Saginaw Police Department, the City of Watauga Department of Public Safety, and the City of Lake Worth Police Department.

A review of the literature explored through the history of policing of America, the development of police technology, and the implementation of in-car mobile video system. Cases such as English v. The State (1992), United State v. Beeler (1999), Ralph Chissell v. State of Indiana (1999), and Freddie Lee Clark v. The State of Texas (1987) has greatly impacted the use of in-car mobile video system by police departments around the nation.

Through the implementation of a survey, police officers of the City of Saginaw Police Department, the City of Watauga Department of Public Safety, and the City of

Lake Worth Police Department indicted responses to their perceptions regarding the use of in-car mobile video system. Data were analyzed through SPSS to reveal whether the differences of opinions between the perceptions of officers who did not have a bachelor's degree and officers who had at least a bachelor's degree, and the perceptions of officers with less than six years of police experience and officers with six or more years of police experience toward the use of in-car mobile video system were statistically significant.

5.1 Contribution to Current Body of Knowledge

It is idealized that this research will make significant contribution to the existing body of knowledge in the field of criminology and criminal justice, especially on the topic of police technology. The literature review suggests that majority of the previous researches were focused on the development of police technology and the development of in-car mobile video system; however no researches were found focusing on officers' education and experience as they relate to police officers' perceptions toward new police technologies. This study examines police officers' perceptions on the use of in-car mobile video system and attempts to ascertain if police officers have a pattern of response based on their education and their experience.

With regards to officers' education, the finding indicates that the differences of the responses that were offered by the officers with at least a bachelor's degree and the officers without a bachelor's degree were not statistically significant. The finding of this study revealed that officers who did not have a bachelor's degree and officers who had at least a bachelor's degree did not seem to react differently towards the implementation

of in-car mobile video system. This may suggest that officers' education level does not affect their perceptions on the implementations of new police technologies.

Even though most of the variables were not statistically significant, the t-test revealed that in case of one variable "The use of in-car mobile video system has improved my job satisfaction," was in fact statistically significant. This means officers' education seems to matter with regard to this variable. For this variable the officers who do not have a bachelor's degree who participated in the study showed a statistically significant higher level of agreement with the statement than the officers who have at least a bachelor's degree. This finding may suggest that college education may have impacted officers in such way that it mattered when it comes to officers' job satisfaction. The finding suggested that job satisfaction to officers with a bachelor's degree was not affected positively by the use of in-car mobile video system. It may suggest that job satisfaction to these officers is achieved in a more significant way than other officers. Job satisfaction to officers with a college degree may be achieved through becoming a police expert in one or more fields during their law enforcement career, or becoming an executive administrator of a police department during the course of their career.

Although education did not make significant differences on officers' perceptions toward the implementation of in-car mobile video system, a college education may have enhanced the overall job performance of a police officer. One may argue that a college education provides an officer a broader base of information for decision making, inculcates responsibility in the individual and a greater appreciation for constitutional

rights. Furthermore a college education may have increased an officer's ability to flexibly handle different or ambiguous situations, developed a greater empathy for diverse populations, resulted in less rigidity in decision making, and helped officers to better communicate and respond to service needs of a diverse public in a competent manner with civility and humanity. In the case of Davis v. Dallas, 777 F.2d 205 (1985), the court said, "Thus, police officers are left with their more essential task which includes social control in a period of increasing social turmoil, preservation of our constitutional guarantees, and exercise of the broadest range of discretion, sometimes involving life and death decisions – of any government service. The need for police officers who are intelligent, articulate, mature, and knowledgeable about social and political conditions is apparent… A college education develops and imparts the requisite level of knowledge."

In the content of this study, experienced officer means police officers who have six or more years of police experience. The findings of this study revealed that in five of the questions with regards to the use of in-car mobile video system as it relates to officers' professional demeanor, use of force, officer safety and officer training, there were in fact statistical significances on the differences of opinions in these areas between officers with less than six years of police experience and the experienced officers. In all five questions, officers with less than six years of police experience showed higher level of agreement with the statement than the experienced officers. The finding may suggest that new police technologies affects more positively on the job performance of police officers with less than six years of law enforcement experience

than the experienced officers. One could also argue that in order to gain a greater success in their law enforcement career, officers with less than six years of police experience are continuously improving themselves by experience new police technologies to ensure their officer safety, and to guarantee that only the appropriate amount of force is affected in order to achieve legitimate law enforcement objectives.

5.2 Limitations of the Study

The possible limitations of the study include that a convenience local sample was utilized, which lacks randomization. Participating agencies use different brands of in-car mobile video system, therefore officers might have different experience during their handling of in-car mobile video system. The sample size utilized in the study was in fact limited.

5.3 Policy Implication

Although in-car mobile video system has been implemented in police departments throughout the United States since the 1980s, no comprehensive studies had been conducted in which the research controlled for officer education and police experience as they relate to officers' perceptions with regards to the use of in-car mobile video system. This study reflects the perceptions of officers as they relate to education and police experience with regards to the impact of the in-car mobile video system. The conclusions drawn from this study should stimulate the supplementary interest in the use of in-car mobile video system and produce impending research.

A finding on the question "How many hours of mobile video training did you receive" revealed that 25.8% of police officers who participated in the study have not

had any in-car mobile video training, and 62.9% of the participants indicated that they have only received one to eight hours training on the use of in-car mobile video system. In 2001, the United States Department of Justice Community Oriented Policing Services Office (COPS) awarded a grant to the Law Enforcement Mobile Video Institute (LEMVI) to provide a 40 hour mobile video instructor course to law enforcement agencies nationwide (LEMVI, 2006). The finding suggested that police officers in majority are lacking for training on the use of in-car mobile video system. It may be possible that the deficiency of training is a factor that caused the in-car mobile video system not being able to produce significant impact on officers' job performance and training. It is suggested that the executive administrators of police departments to adopt the in-car mobile video training as a part of their police field training program or in service training within their departments. Furthermore, it is suggested that the Texas Commission of Law Enforcement to develop a training curriculum on the use of in-car mobile video system and to implement the training program from the police academy level, so that newly hired police officers will become familiar with the use of in-car mobile video as they graduated from their academy training.

5.4 Suggestions for Future Research

Given the fact that education and police experience were studied on the use of in-car mobile video system, it is suggested that future researchers also look into the training issue as it relates to the police use of technology. Future researchers may also want to conduct their studies on how police departments are conditioned to embrace new technologies. In a culture of technology friendly environment within the law

enforcement community, future researchers may also examine whether or not police officers are open to new technology and if the development of technology is affected by the changes of police culture. The research finding introduced here will provide some inside with regard to the perception of technology by police officers.

APPENDIX A

SURVEY

Hello fellow officers,

My name is HongChen Ma. I am a police officer of the University of Texas System Police. I am currently pursuing my Master's degree in Criminal Justice and Criminology at the University of Texas at Arlington.

I am conducting a survey on the use of in-car mobile video system and using the survey to collect data that are needed for my study on "The Impact of in-car Mobile Video System on Policing." The survey has been approved by the University of Texas at Arlington Institutional Review Board for the Protection of Human Subjects. Your participation in this survey is voluntary. To ensure the survey is conducted anonymously please place your completed survey in the sealable envelope, and seal up the envelope before returning it to the person who is monitoring the survey. If you do not wish to complete the survey, please also place your survey form in the envelope and seal up the envelope before returning it to the survey monitor. If you have any question or suggestion regarding the survey, please feel free to contact me at officerma@yahoo.com.

Thank you very much for your participation!

Sincerely yours,

Alan Ma

1. The primary reason the police department installed in-car mobile video system was to_____.

   1. Collect evidence for trial.
   2. Monitor officer performance.
   3. Be used for internal affairs investigations.
   4. Improve public relations.
   5. Protect officers from false accusations.
   6. To guard against racial profiling.
   7. Other.

2. With the help of in-car video system more allegations of misconduct against officers were exonerated or unfounded.

Agree Strongly				Disagree Strongly
1	2	3	4	5

3. The use of in-car mobile video system ensures that my interactions with citizens are handled in a professional manner.

Agree Strongly				Disagree Strongly
1	2	3	4	5

4. The use of in-car mobile video system has assisted supervisors in overseeing officers' professional conduct.

Agree Strongly				Disagree Strongly
1	2	3	4	5

5. The use of in-car mobile video system has made officers' citizen contacts more transparent before the community.

Agree Strongly				Disagree Strongly
1	2	3	4	5

6. The presence of in-car mobile video system has improved my professional demeanor during citizen contacts.

Agree Strongly				Disagree Strongly
1	2	3	4	5

7. The presence of in-car mobile video system affects the behavior of citizens when interacting with police officers.

Agree Strongly				Disagree Strongly
1	2	3	4	5

8. The use of in-car mobile video system has improved my job satisfaction.

Agree Strongly				Disagree Strongly
1	2	3	4	5

9. The presence of in-car mobile video system affects my decision when contemplating use of force.

Agree Strongly				Disagree Strongly
1	2	3	4	5

10. The use of in-car mobile video system promotes officer safety.

Agree Strongly				Disagree Strongly
1	2	3	4	5

11. I am proficient in the operation of in-car mobile video system.

Agree Strongly				Disagree Strongly
1	2	3	4	5

12. The use of the mobile video system has improved my overall job performance as a police officer.

Agree Strongly				Disagree Strongly

1 2 3 4 5

13. The use of the mobile video system enhances the public trust towards the police officer.

Agree Strongly				Disagree Strongly
1	2	3	4	5

14. The use of the mobile video system improves officer training.

Agree Strongly				Disagree Strongly
1	2	3	4	5

15. I review my own videos for the purpose of self assessment.

Agree Strongly				Disagree Strongly
1	2	3	4	5

16. According to the department's policy and procedures, if asked, the officers _____ inform the questioner that audio/video recording equipment is in use.

    1. May
    2. Shall
    3. Are not required to

17. According to the department's policy and procedures, officers are required to activate the in-car mobile video system _____.

    1. Only during detention or arrest.
    2. Only during traffic stops.
    3. During all citizen contacts.
    4. When he/she thinks it is necessary.
    5. Other.

18. How many hours of mobile video training did you receive?

    1. None
    2. 1 to 8 hours
    3. 9 to 16 hours
    4. 17 to 24 hours

5. 24 hours or more

19. I conduct _____ citizen contacts since the department implemented the mobile video system.

    1. More
    2. Same
    3. Less

20. What is your age group?

    1. 21-25
    2. 26-30
    3. 31-40
    4. 41-50
    5. 51 or above

21. What is your gender?

    1. Male
    2. Female

22. What is your race/ethnicity?

    1. African American
    2. Asian
    3. Caucasian
    4. Hispanic
    5. Native American
    6. Other

23. What is the highest grade of school you have completed?

    1. High school diploma/ G.E.D.
    2. Some college
    3. Two year degree (A.S., A.A., etc.)
    4. Four year degree (B.S., B.A., etc.)
    5. Advanced degree (M.S., M.A., J.D., Ph.D., etc.)

24. How long have you been a police officer?

1. 0-2 years
2. 3-5 years
3. 6-10 years
4. 11-20 years
5. 21 or more years

25. What is your current assignment?

1. Uniformed Patrol
2. Criminal Investigation Division
3. Traffic
4. Specialized Division (SRO, Crime Analysis, Research and Planning, etc.)
5. Administration

26. What is your current rank?

1. Police Officer
2. Corporal / FTO
3. Sergeant
4. Lieutenant
5. Deputy Chief or above

27. What is your current shift assignment?

1. Day Shift
2. Evening Shift
3. Midnight Shift
4. Swing Shift
5. N/A

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BIOGRAPHICAL INFORMATION

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