

LEARNING STRATEGIES UTILIZED BY POLICE  
OFFICERS

By

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## CHAPTER I

### INTRODUCTION

#### Background

##### The Changing Police Profession

As we begin the 21<sup>st</sup> Century, the policing profession finds itself in the midst of exciting yet complex change. The emergence of community-oriented policing is the driving force behind this fundamental change. Trojanowicz and Bucqueroux (1990) provided what has become a well-known definition of community policing:

Community policing is a new philosophy of policing, based on the concept that police officers and private citizens working together in creative ways can help solve contemporary community problems related to crime, social and physical disorder, and neighborhood decay. The philosophy is predicated on the belief that achieving these goals requires that police departments develop new relationships with the law-abiding people in the community, allowing them a greater voice in setting local police priorities and involving them in efforts to improve the overall quality of life in their neighborhoods. It shifts the focus of police work from handling random calls to solving community problems. (p. 5)

Community oriented policing will require police organizations to re-evaluate the manner and methods of providing service to the communities they serve. Under the axiom of community policing, police officers will be

required to solve problems by working in partnerships with law-abiding citizens. In essence, police officers will be required to "look outside of the box" when approaching crimes inherent in a neighborhood. Police officers will be expected to deviate from the traditional reactive strategies and utilize proactive strategies, which are tailored to solve community-based problems. Mulcrone (1993) asserted that community policing is a departure from police tradition, which is based on reacting to crime. The movement is a shift in enforcement philosophy that challenges officers to develop new sensitivities in dealing with special populations, look beyond typical reactive responses, determine causes for problems, and suggest innovative solutions.

Community oriented policing will have a major impact on both the external operating environment (service delivery to the community) and the internal operating environment (within the police organization). Today's police officer is expected to learn a vast amount of subjects that center on community policing. Police academy executives and commanders are left in a perplexing situation regarding the most effective methodologies to utilize in teaching neophyte and veteran police officers the skills necessary for community policing.

## Evolving Themes

If the policing profession is to effectively evolve into community oriented policing strategies, then it becomes paramount to identify the most effective methods to accommodate the changes required. To change an organization or a profession requires training and education. Police executives and trainers will face the encumbering task in carrying out this new orthodoxy. They will have to make a critical examination of the past methods of doing business and adopt improved techniques to teach the new skills that accompany community oriented policing. It will also be important for police executives and trainers to have specific information on the manner which police learn and conceptualize new information and tasks.

The strategies that police officers use to learn a new skill or subject increasingly become an important issue. There are a host of scholars that have presented what have been salient themes in learning strategy research. These scholars have consistently found that distinctive groups of learners exist when they are identified by the pattern of learning strategies which they use (e.g., Conti & Kolody, 1998; Lockwood, 1997; Bighorn, 1997; Ungricht, 1997; Strakal, 1994; & Moretti, 1994).

The researcher points to some relevant generalizations made in the literature pertaining to learning strategies. Conti and Kolody (1998) defined learning strategies as those techniques or specialized skills that the learner has

developed to use in both formal and informal learning situations. Conti and Fellenz (1991) argued that because of the global nature of learning styles and in light of the failure of learning style research to identify differences that can be used for organizing groups of learners, the concept of learning strategies has emerged.

The theoretical approach of this study combines the broader scholarship of community oriented policing with the current literature giving spotlight and attention on learning strategies and adult education. Community policing has been presented in the contemporary literature as constituting a viable method for engaging organizational change within policing. At the same time minimal attention has been given to how this change is facilitated throughout the organization and, more importantly, what learning strategies can be used to facilitate this change.

The emergence of community oriented policing has sparked a corollary interest in the training and education of police officers. This research proposes that if preferences for learning strategies can be identified among police populations, specific teaching methods can be adapted to best foster the new evolving theme of community oriented policing.

#### The Problem

There is currently a void in the literature that identifies specific learning strategies utilized by police

officers. As policing evolves into community oriented strategies, police officers will be required to learn subjects which have historically been absent in the pre and post-service training curricula. If learning strategies among police officers can be identified, then it will place police trainers and executives in an advantageous position when teaching and fostering a community policing strategy in their organizations.

### The Purpose of the Study

The purpose of this study was to describe the learning strategies used by police officers employed by the Wichita, Kansas Police Department. Learning strategies were identified in this study by administering the Assessing the Learning Strategies of Adults (ATLAS) instrument to 80 Wichita, Kansas Police Officers. Furthermore, basic demographic data was collected from participants for statistical analyses.

### Research Questions

This study investigated the learning strategies used in real life learning situations by police officers. The use of specific learning strategies was measured with the "Assessing the Learning Strategies of Adults" (ATLAS) instrument. This study addressed the following research questions:

1. What are the learning strategies used by police officers employed by the Wichita, Kansas Police Department?
2. Is there a difference in learning strategies preference by police officers assigned to traditional patrol duties and those assigned to community policing duties?
3. Is there a difference between the learning strategies preference utilized by police officers that hold college degrees and those police officers without college degrees?
4. Is there a difference between learning strategies preference by gender?
5. Are there differences in learning strategies preference by race?
6. Do years of police experience have an effect on learning strategy preferences?
7. Are there differences in learning strategies preference by the age of the police officers?

#### Significance of the Study

This study has a vast amount of empirical and practical significance for both practitioners and scholars. The study represents an important contribution to the empirical literature that identifies learning strategies based on groups of individuals. This study sheds light on the learning strategies that police officers utilize when learning a new task or job. As previously stated, the general research questions in this study find a specific

theoretical location in the broader scholarship of community policing as well as the current literature giving spotlight and attention to the general adult education and learning strategies data.

These data will be advantageous for police executives and trainers. If learning strategies among police officers can be identified, it may be possible for police trainers to use specific strategies when teaching a broad range of subjects. Furthermore, if learning strategies of police officers can be identified it will place police executives in a advantageous position when fostering community oriented policing strategies within their organizations. For example, it would be a much easier task for the chief executive officer of a police organization to tailor organizational change based on the predominate learning strategies of his or her organization.

This study will be of interest to both adult education and criminal justice scholars. There is a growing body of literature governing the benefit of identifying learning strategies in the broadest of professions. However, empirical data is sorely lacking pertaining to learning strategies utilized by police officers. This study will add to the growing body of research findings on learning strategies data and will allow scholars and researchers to further explore the possibilities of specific learning strategies inherent within the policing profession.



## Conceptual Assumptions

This study assumed that participants responded on the Assessing the Learning Strategies of Adults (ATLAS) instrument in an accurate manner when identifying their individual learning strategy. Furthermore, it is assumed the demographic responses are honest and accurate in nature.

## Definitions of Terms

The following definitions of terms are furnished to provide, as nearly as possible, clear and concise meanings of terms as used in this study:

- Andragogy - The art and science of helping adults learn (Knowles, 1990).
- ATLAS - Acronym for "Assessing the Learning Strategies of Adults." Research instrument utilized to assess the learning strategies of adults.
- Community Policing Assignment - Those police officers who are assigned to community policing duties. These officers are typically relieved from answering 911 calls and work in partnership with the community in solving neighborhood problems. These officers typically work flexible hours and are resources for the community. A typical day may be working with a rental agency on tenant problems, investigating a school truancy problem, facilitating a meeting with business owners, facilitating

a neighborhood mediation session, working with neighborhood citizens regarding a nuisance and conducting a crime prevention program (Palmiotto, 2000).

- Engagers - Passionate learners who love to learn, learn with feeling, and learn best when actively engaged in a meaningful manner. Subgroup 1 likes to use human resources while Sub-group 2 favors reflecting upon the results of the learning and planning for the best way to learn (Conti & Kolody, 1998).
- Learning Strategies - "Techniques or skills that an individual elects to use in order to accomplish a specific learning task. Such strategies vary by individual and by learning objective. Often they are so customary to learners that they are given little thought; at other times much deliberation occurs before a learning strategy is selected for a specific learning task" (Fellenz & Conti, 1998)
- Navigators - Focused learners who chart a course for learning and follow it. Subgroup 1 likes to use human resources while Subgroup 2 is more concerned with the organization of the material into meaningful patterns.
- Pedagogy - The process of educating children.

- Police Officers Holding College Degrees - Those police officers holding an associate, bachelor, master's or doctorate degree.
- Problem Solvers - A learning strategy which relies heavily on all the strategies in the area of critical thinking. Subgroup 1 likes to plan for the best way to proceed with the learning task while sub-group 2 is more concerned with assuring that they use the most appropriate resources for the learning task (Conti & Kolody, 1998).
- SKILLS - Acronym for "Self-Knowledge Inventory of Life Long Learning Strategies." A learning strategies inventory which identified learning strategies commonly found in everyday life and which call for a learning effort on the part of the respondent (Fellentz and Conti, 1993, P. 2).
- Traditional Patrol Assignment - These Police officers work a very structured shift and answer 911 calls. They are assigned to a geographical area of the city commonly referred to as a beat. Much of their function is reactive in nature to crime. A typical work day may be taking a burglary report, responding to a domestic violence call, investigating a traffic accident, directing traffic, other miscellaneous services and at

times sitting in a police patrol car for extended periods of time with minimal or no activity.

### Scope and Limitations

The scope of this study is police officers employed by the City of Wichita, Kansas. The Wichita, Kansas police department employees about 600 commissioned police officers. Specifically, police officers assigned to traditional patrol and police officers assigned to community policing duties were utilized for this study.

This study was a descriptive study design. In light of this, the study only investigated police officers working in one specific organization. Generalizations can only be drawn about this specific police agency. It is also recognized that a larger number of participants may have been more convincing. However, the number of police officers assigned to community policing duties were limited which required the researcher to utilize all police officers assigned to the community policing section.

One other limitation was the evaluation of police officers learning strategies based on gender. It would have been desirable to investigate learning strategies between female police officers assigned to community policing duties and female police officers assigned to traditional patrol duties. This was not possible due to the limited number of women assigned to community policing duties. In light of this impediment, general gender comparisons were made (e.g.,

female police officers compared to male police officers  
neutral to assignment).

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Introduction

The literature review will cover three mutually reinforcing areas. First, a review of the community policing literature will be undertaken. The focus of the community policing literature will be to examine the changes required for police organizations and the need for learning strategy knowledge. Second, the general adult learning literature will be reviewed with emphasis on its relevance for the police occupation. The final area that will be reviewed is the general learning strategy literature.

#### Community Policing

Community policing represents a departure from police tradition that was largely based on the police reacting to incidents of crime. Community policing centers on an actual shift in philosophical underpinnings which require the police to identify and solve community problems before they lead to serious crime.

Goldstein (1987) asserted that under the axiom of community policing, officers are frequently expected to not only respond to the full range of problems that the public

expects the police to handle, including peace keeping, but also to take the initiative to identify whatever community problems beyond those within the widest definition of police functioning that may affect the public's sense of well being.

Community oriented policing has sparked a myriad of changes in the policing profession. Under the axiom of community policing, police will be required to work in partnership with citizens in order to solve problems and improve the quality of life in neighborhoods. Trojanowicz (1990) observed that "community policing requires a department-wide philosophical commitment to involve average citizens as partners in the process of reducing and controlling the contemporary problems of crime, drugs, fear of crime and neighborhood decay; and in efforts to improve overall quality of life in the community" (p. 125).

Oliver (1998) asserted that the ideas of community policing are relatively simplistic in-so-much that the police take on a role of being more community oriented and the citizens take on a role of being more involved with assisting the police with information. Watson, Stone, and Deluka (1998) argued that with community policing, police officers will be expected to become partners with the community in maintaining social order. Other scholars propagated a similar thesis (e.g., Alpert & Dunham, 1992; Carter & Radelet, 1999; LaGrange, 1998; Peak & Glensor, 1996).

Community policing differs from traditional law enforcement because it allows officers the freedom to expand the scope of their jobs. Community policing requires police officers to learn a whole host of new skills. Officers in this sense are challenged to become community Problem Solvers and encouraged to use their time creatively. Furthermore, officers will be required to discern vast amounts of information and recognize resources to solve a problem.

#### Pedagogy of Police Training

It is clear that community policing requires a fundamental shift and deviation from tradition. This change has implications for almost every area of policing including training. The hegemonic form of police training has been primarily mechanistic (behavioral) in nature and usually performed in a rigid paramilitary and behavioral environment. Ramirez (1996) found that law enforcement education is a field dominated by a militaristic and behaviorist approach. Ortmeier (1997) related that a militaristic and behavioral environment in policing may indeed be effective when teaching technical and procedural skills but this type of environment does little to promote the acquisition of essential non-technical competencies such as problem solving, judgement, and leadership (p. 88).

Behaviorism focuses mainly on the hard sciences for an explanation into human functioning. Behaviorism



concentrates solely on the objective and very rarely recognizes the subjective human feeling. Elias and Merriam (1995) asserted that under the realm of behaviorism that the intellect, feelings, and emotions of a person's inner life are not observable or measurable and therefore not investigated. A behavioral educator would advocate that learning is a change of behavior. These same educators would rely heavily upon behavioral objectives that are sometimes referred to as instructional objectives. Advocates of behavioral objectives assert that learning outcomes can be measured objectively and precisely, which will subsequently reveal how much progress have made by the learner. Elias and Merriam (1995) further found that three components could readily be found in behavioral realm of education:

(1) the relevant conditions or stimuli under which a student is expected to form; (2) the behavior a student is to perform including a general reference to the product of the student's behavior; and (3) a description of the criteria by which the behavior will be judged acceptable or unacceptable, successful or unsuccessful. (p. 89)

The behavioral environment is commonplace in most police training classrooms and normally permeates the organizational culture. There is little research regarding how effective neophyte police officers learn in this type of environment. The problem with learning under the behavioral view of education is that learning constitutes much more than a uniform structured environment as advocated by behaviorists. Each individual learner may approach learning

from a distinct strategy and style. Learning is a very complex process and involves many different types of behavior in order to reveal that learning has occurred. Learning strategy research has indicated that there are distinct patterns of learning that individuals may use. A behavioral educator would argue that all learning should take place in a uniform environment.

Edwin Meese (1993) a former Attorney General of the United States, asserted that:

The content of police training must go beyond merely preparing officers for the mechanical aspects of police work and that training should help them to understand their communities, the police role, police history and even imperfections of the criminal justice system. (p. 6)

Dunham and Alpert (1993) made a similar argument when they asserted that training must focus on the need for choice in specific, clearly delineated situations and the reality of police work must be brought into the classroom. Webber (1991) complained:

We don't teach young officers the techniques of problem analysis, of identifying and coming up with strategies to problems...We do not teach recruits how to organize a neighborhood in order to deal with neighborhood problems and that we have to make this apart of everyone's training. (p. 30)

Alpert and Dunham (1992) argued that police training in most police academies is heavily weighted towards the technical aspects of police work. Walker (1992) formed a similar conclusion, arguing that many police training programs do not cover important subjects and that training

of recruits may not adequately prepare officers for the tasks they face.

Teaching the mechanical crime-fighting aspects of the job creates a problematic environment for agencies incorporating a community based policing strategy into their operations. For example, community policing requires police in the field to work in consort with citizens to solve problems. In light of this, it would be beneficial for police academies to place more emphasis in the curricula on subjects such as communication skills, problem solving, conflict resolution and proper methods of facilitating meetings.

The behavioral environment of police training may create an unnecessary amount of stress on the learner which in some cases may minimize the learning experience. Torrence (1993) asserted that training environments must be free of fear and that a stressful environment fraught with threats is not likely to elicit trainees' openness, participation, and positive feelings.

Many scholars have argued that the concept of problem solving should be grounded thoroughly within the culture of police training. Peak and Glensor (1996) asserted that problem solving should be the foundation for police training and that police officers must hone their skills as street-level criminologists. Some scholars have found the hegemonic culture of police training to be slowly changing. Walker (1992) related that the content of police training

has changed significantly, with less emphasis on the purely behavioral and technical aspects of the job. Walker further noted that in light of these changes, the current state of police training has several shortcomings that must be overcome. There seem to be several deficiencies of certain subjects in the training curriculum (e.g., problem solving, communication skills, and resource identification skills).

If substantial change in policing is to be achieved, training must be enhanced. Goldstein (1993) found serious deficiencies in the training of veteran police personnel and further found that, in many cases, training for change within the police organization consisted of no more than a day in the academy. Dantzker et al. (1995) argued:

If the intent of community policing training is to produce fundamental changes in policing, then training materials and approaches must explicitly reflect and support those changes. Learning to think critically, to solve problems, or to share responsibilities with citizens is not fostered by authoritarian or non-interactive training techniques. (p. 50)

Trojanowicz and Bucqueroux (1994) asserted that a community-policing department will require the department to shift training from mastery and obedience to a focus on empowering. These authors further asserted that "this philosophical shift has profound implications for everything that is taught in training, from the academy, through field training, to in-service training" (p. 57).

The literature does not address which teaching and learning strategies work best in police training and the

organizational environment. Hence, this leaves both police executives and trainers in a perplexing situation. The policing profession can glean a great deal from the rich body of adult education literature and should entertain fostering adult learning principles when teaching police officers.

### Adult Learning

The literature that centers on the notion that adults learn differently than children is replete. It is clear that the process of learning in most police organizations, it is primarily conducted in a behavioral, rigid paramilitary environment. McCreehy (1983) asserted that the philosophy of most police training programs is based on three precepts: "it should closely follow the military training model; it should be a punishment-centered experience in which trainees must prove themselves; and it should help screen out those who aren't up to par" (p. 32). Satterfield (1986) found that many recruits have a difficult time adapting to a paramilitary training structure in-so-much that one day recruits find themselves living a normal life and the next day they find themselves thrown into an academy environment whose structure is based on a semi-military system.

Adult education scholars have long recognized that approaches such as those listed above will result in a spurious notion of learning and that learning should move

towards more humanistic strategies. The police function is to uphold constitutional guarantees on the part of all citizens and to enforce laws impartially. The paradox here readily comes to light. The police work in a democratic society but are trained and learn their jobs in a very paramilitary, punitive, and authoritarian environment.

Police officers work in an ever-changing environment. In light of this, there is a myriad of literature from the adult education realm that may serve as a guide for police executives and trainers when teaching and fostering organizational change. This becomes increasingly important particularly as policing evolves into community oriented strategies.

### Humanism

The humanist paradigm of adult education centers on the learner being self-directed and the teacher fulfilling the role as facilitator and not merely the guardian of knowledge. The humanist educator would argue that learning should focus on the affective internal processes of the individual. Hence, focusing on growth of the individual as postulated by the humanist paradigm will assuredly foster growth within society as a whole. It is recognized that if an individual develops and grows in an intrinsic manner, this growth will effect society as a whole, based on the contributions that the individual will make within his or her environment.

The humanistic philosophy of education stems from the humanistic psychology school which was advocated by Abraham Maslow. Maslow (1970) in his classical work succinctly argued that the goal of the learning experience is largely a process of self-actualization (becoming all one is capable of becoming). According to Maslow, self-actualization is achieved through a multiple hurdle process. Before a person achieves self actualization, he or she must meet needs within a hierarchy before proceeding to the next actualizing level. Maslow (1970) argued that the first element of the needs hierarchy states that a need that is unsatisfied activates seeking behavior. This, in essence, would be the striving or energizing function. For example, a hungry person will search for food. A person whose social needs are unsatisfied will take action to gain acceptance and friendship. When a need is satisfied, it is no longer a primary motivator. Thus, satisfied needs no longer motivate. Within Maslow's hierarchy of needs theory, all lower level needs must be satisfied in order for a higher level need to be motivated.

Kramlinger and Huberty (1990) asserted that humanism purports that real learning, (what one discovers for oneself), took root in the Socratic method and in Plato's belief that all knowledge is inherent. These authors further asserted that at some later time humanism more fully developed under the influence of self-directed therapies such as those of Carl Rogers. Rogers (1951) in his

classical writings related that one changes the world by changing people. Rogers succinctly argued that the role of the therapist was not to set the direction of change; instead, his or her role is to provide a method by which the client could set these for their self. Rogers emphasized the supportive, permissive and non-directed role of the counselor, hence, client-centered therapy.

Client-centered therapy has a vast amount of relevance for adult education and has set a pioneering direction for adult education scholars. Rogers (1969) carried this idea further addressing teaching and learning when he argued, "A way must be found to develop a climate in the system in which the focus is not upon teaching, but on the facilitation of self-directed knowledge" (p. 304).

Elias and Merriam (1995) asserted that humanistic adult educators are concerned with the development of the whole person with a special emphasis upon the emotional and affective dimensions of the personality. Elias and Merriam further argued that the goal of humanistic education is the development of persons who are open to change and continued learning, with the goal of striving towards self-actualization. This is exactly what is needed within the realm of police training and culture throughout the organization. Beder (1989) argued that given light of the objectives of the humanist school (to assist learners in experiencing the quality that separates humans from other



animals the ability to choose), adult education should become highly learner centered. Within this context, the teacher becomes a facilitator of learning and not solely a conveyor of knowledge.

The Association for Humanistic Psychology expressed four tenets that build the foundation for an andragogical approach to adult learners. Darkenwald and Merriam (1982) examined these tenets and summarized them as follows:

1. A centering of attention on the experiencing person and thus a focus on experience as the primary phenomenon in the study of man.
2. An emphasis on such distinctively human qualities as choice, creativity, valuation, and self-realization, as opposed to thinking about human beings in mechanistic and reductionistic terms.
3. An allegiance to meaningfulness in the selection of problems for study and of research procedures, and an opposition to a primary emphasis on objectivity at the expense of significance.
4. An ultimate concern with and valuing of the dignity and worth of man and interest in the development of the potential inherent in every person. Central in this view is the person as he discovers his own being and relates to other persons and to social groups (p. 78).

### Andragogy

The thrust towards personal growth within the realm of adult education was the hue and cry in the 1950's and 1960's. The humanistic movement vastly influenced one scholar, Malcolm Knowles. Knowles became an outspoken proponent of the idea of personal growth through the process of education. Knowles (1980) argued that adults must be

taught differently than children and that the learning process of adults is drastically distinct when compared to children or the traditional pedagogical approach.

Knowles, a strong proponent of self-directed learning and the teacher's role as a facilitator in the process of adult education, is well known for his theory of andragogy. Knowles (1990) related, "Andragogy is a theory which is vastly in contrast to the traditional pedagogical model and it advocates both the self-directed learning concept and the teacher as the facilitator of learning" (p. 57).

The writings of Knowles are fraught with the message of self-directed learning and learning based upon the experience of the student. Knowles (1990) argued:

Adults are motivated to devote energy to learn something to the extent that they perceive that it will help them perform tasks or deal with problems they confront in their life situations. Furthermore, they learn new knowledge, understandings, skills, values, and attitudes most effectively when they are presented in the context of application to real life situations (p. 61).

Additionally, scores of other scholars have found self-directed learning and andragogy to be the principal guiding force in the practice of adult education (e.g., Brookfield, 1996; Cafferella, 1993; Collins, 1991; Cotton, 1995; Merriam & Cafferella, 1991).

The writings of Knowles are clearly rooted in the humanistic thought in so much as he believed that all individuals should strive to achieve their goals and full potential as human beings. In keeping in the true

humanistic spirit, Knowles (1970) asserted that it is the mission of every adult educator to help individuals satisfy their needs and achieve their goals. In light of this, it is clear that Knowles believed that the teacher plays a significant role in assisting students to achieve their individual levels of self-actualization.

The literature is clear that Knowles unwaveringly spent a great deal of his life espousing that learning was more than a formal process that one goes through in school. Knowles (1970) asserted, "One mission of the adult educator, then, can be stated positively as helping individuals to develop the attitude that learning is a life long process and to acquire the skills of self-directed learning" (p. 23). Knowles (1970) hypothesizes that with the ever-increasing importance of adult education in American society, more creative practitioners will be attracted to the andragogical model. A query of the literature reveals that many institutions and organizations have indeed adopted many of the components of the andragogical model of adult training and education. Knowles (1984) stated it best:

The andragogical model has been widely adopted or adapted in a variety of programs -- from individual courses at entry level of education to total programs of in-service education, human resources development, continuing professional education, technical training, remedial education, and religious education (p. 20).

According to Knowles (1980), researchers and practitioners must shift their thinking from a focus on teaching to a focus on learning. It is clear, according to

Knowles, that most educational psychologists with the exception of Piaget and Bruner gave their undivided attentions to studying the reactions of children to teaching methodologies, and in many cases, ignored the immediate needs of the learner. It has further been argued that schools of the past were primarily interested in training teachers to control students, ignoring many other salient issues. As a result of this old line thinking, the idea of facilitating a new style of learning (self-directed learning) begin to evolve.

The new style of learning advocated looking at what goes on inside of the learner as opposed to the actions of the teacher. As noted previously, the humanist paradigm in which andragogy is grounded advocates the subjective, affective aspects of the person. This is a succinct example of how the andragogical adult learning theory parallels the mainline humanistic thought.

Law and Rubenson (1988) argued that Knowles captured the sentiment that emerged within adult education during the late 1950's and early 1960's. Law and Rubenson further related that from the concept of andragogy evolved the tradition of adult education focusing on the adult as a learner. This in-and-of itself shed more attention on the psychological and developmental aspects of the learner.

Knowles (1996) succinctly argued that adult educators can not teach adults in the same manner that children have been taught (pedagogical model). Knowles further argued

that adults are voluntary learners and they simply disappear from learning situations that do not satisfy them. Given light of this, Knowles was accurate when he argued that the practice of adult education has in-fact slowly departed from the traditional pedagogical methodologies.

During the 1960's, andragogy was readily embraced as the one method to more effectively foster adult learning. Andragogy was accepted without much criticism until the 1970's. It was during this time that many scholars began to question the distinctions that Knowles made between adults and children. Primarily, this question centered on whether children can be self-directed in the learning process in the same manner as adults. Furthermore, the question was raised whether or not children could draw from past experiences in self-directed learning endeavors. These and other criticisms prompted Knowles to clarify and modify his theory of andragogy. Knowles (1970) asserted several clarifications:

1. Adults need to know why they need to learn something before undertaking to learn it.
2. Adults have a self-concept of being responsible for their own lives.
3. Adults come into an educational activity with both a greater volume and a different quality of experience from youths.
4. Adults become ready to learn those things they need to know or...to cope effectively with their real-life situations.
5. In contrast to children's and youths subject-centered orientation to learning (at least in school), adults are life centered (or task

centered or problem centered) in their orientation to learning.

6. While adults are responsive to some extrinsic motivators (better jobs, promotions, salary increases, and the like), the more potent motivators are intrinsic motivators (the desire for increased self-esteem, quality of life, responsibility, job satisfaction, and the like. (pp. 83-84)

Most agree that the theory of andragogy has made a significant impact within the realm of adult education. Merriam and Brockett (1997) asserted that the development of andragogy had a tremendous impact on how adult educators understand and work with adult learners. These authors further asserted that for many, andragogy has become almost a way of forging an identity in the field of adult education. Courtney (1989) argued that if there has been a single dominant theme the professionalism of the field of adult education, it has rested on the concept of andragogy.

The salubrious nature of andragogy makes it a viable option for any discipline or aspect of life-long learning and education. For example, an examination of the demographic context of the American workforce reveals that it is evident that it is growing older and more diverse. Judy and D'Amico (1997) reported that:

The American labor force will become somewhat more brown and black in the next twenty years, but its most pervasive new tint will be gray. America's baby boomers share the hopeful prospect of living decades past the traditional retirement age. Many of them will want to keep working and will have much to offer. (p. 122)

Other scholars have asserted a similar thesis. Chideya (1999) provided a manuscript which addressed demographic

changes in America. Chideya found that America's racial composition is changing more rapidly than ever and the number of immigrants in America is the largest in any post-World War II period.

These demographic changes in the workforce will assuredly require variations in adult education and training. The andragogical model appears to be a sound method to ameliorate many of the complexities that adult educators may face now and in the future. For example, it is apparent according to demographers that the workforce is in fact growing older. In many instances workers are being trained for different jobs at more mature ages than experienced in the recent past. Adult learners in this sense bring a vast amount of experience into the classroom. Teachers and facilitators should capitalize on these experiences when teaching a new skill. More importantly, the identification of learning strategies among these learners may assist adult educators in designing specific teaching strategies. It will become increasingly important to identify learning strategies as evolving societal trends more fully blossom.

Can andragogy with its emphasis on incorporating life experiences into the learning process be an appropriate means to foster learning a new job or skill? Many scholars answer yes. Putman and Bell (1990) asserted that since older learners will have more life experience, learning specialists will need to find better ways to capitalize that

experience in a learning area. These authors further argued that an andragogical approach to teaching and learning will be dramatized and that this will ultimately lead to the learning specialist's approach from content dispenser to facilitator. Other scholars (e.g., Konicek, 1996; Matthews, 1995) have made similar conclusions.

### Andragogical Approaches to Police Training

The evidence is clear that andragogical assumptions are far more realistic than the traditional methods of teaching and learning. With this in mind, a number of salient questions readily emerge. Can policing incorporate andragogical techniques within the training environment? If so, how is this done? More importantly, what are the general implications for learning?

The training conducted in police training academies should highlight self-directed learning on the part of the police officer. This would go hand-in-hand with community policing. For community policing to be successful, police officers have to be self-directed. When they discover a problem, they will be expected to solve it. What better place to implement the self-directed role of a police officer than in a police training academy. Police recruit training has for too long been mechanistic and behavioral in nature. This has to change.



The behavioral and militaristic nature of police training may be problematic and result in a spurious notion of learning when specific subjects are taught. Verner (1962) succinctly argued that a specific teaching method must be matched to matter. Hatcher (1997) asserted that within the context of self-directed learning, the trainees do not depend on trainers to meet their specific learning needs and that trainees can learn at their own pace and determine their level of expertise.

Veteran police officers and neophyte police officers alike can benefit from an environment that incorporates many of the principles from the andragogy model of learning. Police training academies have to deviate from the mechanical, militaristic and behavioral aspects of training to training programs that inform police recruits how to identify, respond to, and solve problems such as crime, drugs, fear of crime, and urban decay within the neighborhoods they serve. Training has to become mission oriented and should respond to what the police recruit has to know to perform his or her job effectively.

Police training sessions can be enhanced through self-directed group discussions and active debate within the context of the training classroom. Police recruits should work out differences and develop personal understandings in the training classroom environment. Palmiotto, Birzer and Unnithan (2000) related that "when recruits are allowed to engage in self-directed group discussions with instructors

allowing for the airing of many viewpoints, the recruit training classroom should begin to mirror the community with its many voices and perspectives” (p. 19).

Police recruits should be allowed to engage in self-directed group discussions and the instructor should facilitate these and allow for sound discussion and debate. Ramirez (1996) asserted that to effectively train today's police officers, there must be a move away from the behavioral training environment in which the teacher feeds knowledge to a dependent learner and then the learner is expected to reproduce the knowledge in some clearly observable behavioral outcome.

Community policing officers engage in learning a variety of skills when compared to traditional patrol officers. Community policing officers are expected to conceptualize problems and seek solutions (Palmiotto, 2000). They are expected to scan, analyze, respond and assess a problem. In contrast, traditional patrol officers function as more reactive in nature. For example they typically respond when a crime has been committed. Community policing officers are more proactive in so much that they seek to eliminate small disorder problems to prevent them from escalating into serious crime related problems.

It is evident based on the literature that community policing is driving fundamental change in the police profession. Secondly, it is realized that the training methods currently utilized in police organizations will be

deficient in the development of police officers. The final question that remains of corollary importance and which is the focus of this study, pertains to learning strategies. What is the relevance of identifying learning strategies of police officers? If learning strategies can be identified, what are the benefits?

### Learning Strategies

Learners approach learning endeavors from a divergence of differing techniques. The manner in which adults learn and conceptualize a new task is quite different from learner to learner. There appears to salient paradox to this thought. Darkenwald and Merriam (1982) recognized that adults do indeed employ differing methods to learn a new subject or skill, hence, presenting a sharp contrast to the relatively uniform techniques used in the instruction of children. The process of educating children (pedagogy) is quite uniform throughout the educational system. Traditionally, the same process has been held to be the uniform teaching method for adults as well. However, in a more contemporary light, it is clear, and there is a rich literature base, that indicates that adults do learn differently when compared to children. Learning strategy research capitalizes on this by investigating those strategies adults use to learn.

Fellenz and Conti (1993) asserted that learning strategies are the techniques and skills an individual

utilizes in order to accomplish a learning task. It is of corollary importance to make a distinction between learning strategies and learning styles. Learning styles refer to the inherent ways that people process information. In contrast, learning strategies deal with the way people approach specific learning situations (Conti & Kolody, 1995). For example, one learner may approach learning a new task in a more uniform and structured manner while another learner may search a host of resources in a less structured manner in an effort to identify the best method to undertake the learning endeavor.

Educational and psychological researchers have queried learning strategies for a definitive distinction between individual learners. They have used a myriad of processes including intelligence measures, cognition, teaching theories, and the use of learning styles research. The interesting point to be made here is that many of these researchers not have not taken into account the various strategies and approaches that adults may use when encountering a learning situation. Hence, they have neglected asking a very important question. What are the approaches learners take to accomplish their learning needs? Fellenz and Conti (1989) asserted that learning strategies are external behaviors developed by an individual through experience with learning, which the learner elects to use in order to accomplish the task.

Police officers use a variety of resources to accomplish various tasks and solve problems. Furthermore, police officers have to adapt to numerous situations in the field. For example, when police investigate an incidence of domestic violence, each situation has its own specific set of circumstances. Each situation may require a number of differing resources and strategies to solve the problem. This example is symbiotic with many of the activities police engage in the field.

Learning is a continuous and complex process for police officers and may take place in a divergence of situations. Police officers are typically involved in tasks such as identifying problems, assessing community needs, identifying potential solutions, evaluating options, deciding which options are best to utilize, and implementing the chosen alternative. Many of these tasks are learned informally when the police are in the field and have to make daily decisions tailored to specific situations.

#### Learning Strategies Development

Learning strategies research (e.g., Conti & Fellenz, 1991; Conti & Kolody, 1998; Fellenz & Conti, 1989; & Fellenz, 1993) have identified five integral areas of learning strategies utilizing the Self-Knowledge Inventory of Lifelong Learning Strategies (SKILLS). SKILLS is a learning strategies instrument developed to measure specific

areas. These areas are Metamotivation, Metacognition, Memory, Critical Thinking, and Management of Resources.

Metamotivation is the awareness of and control over factors that energize and direct one's learning (Fellenz, 1993, p. 12). In other words, Metamotivation pertains to the learner being aware and conceptualizing why he or she is motivated to participate in the learning endeavor.

Metacognition can be described as the executive control of learning. It pertains to how a learner goes about planning the learning endeavor, assessing the plan in relationship to how well it is being carried out, and adjusting the plan to more effectively meet the learning goals. It is important to note that as a learning endeavor is carried out, many variables can cause a deviation from the original plan. This underscores why it is important for the learner to assess and adjust the learning throughout the learning process (Conti & Fellenz, 1991).

Memory is described in a diversity of verbiage depending on the individual author. Generally, memory can be defined as the distinct capacity in which information is filed for a period of time (Merriam & Cafferella, 1991, P. 161). Within the context of learning, memory processes, acquisitions, structure, retrieval and storage become important factors (Conti & Fellentz, 1991). These are mutually reinforcing. For example if there is no acquisition of knowledge, there can be no retrieval. Hence, a person can not retrieve what has not been stored.

Critical thinking involves the process of how one reflects upon the learning material. A synthesis of the literature presented by Brookfield (1987); Conti & Kolody, (1995); Fellenz, 1993; Fellenz & Conti (1989); Kolody (1997), Mezirow (1990), Merriam & Caffarella (1991), have succinctly found that critical thinking is the applications of real life situations to the learning situation and that it is the process of reflecting upon what is being learned and evaluating its worth and appropriateness. Furthermore, critical thinking is the process of encouraging one to critically think, express oneself publicly, testing assumptions and challenging them, and to engage in written and verbal dialogue.

Resource management are those methods in which learners identify and manage learning resources. One example of this is the various sources of information that a learner may utilize within the leaning process. Resource management strategies are those ways that a learner manages learning resources, identifies appropriate resources, critically assesses the resources, and uses human resources (Conti & Fellenz, 1991).

The SKILLS instrument has resulted in a number of studies being conducted in diverse populations. Furthermore, these studies have found that selected demographic variables are not useful in discriminating among different groups of learners (Conti & Fellenz, 1991). However, the studies did find that distinctive groups of

learners exist when they are specifically identified by the learning strategies which they use (Conti & Kolody, 1998, p. 109). Using the SKILLS database, the Assessing The Learning Strategies of Adults (ATLAS) was developed.

The ATLAS instrument is designed to place respondents into one of three different strategy usage areas: Navigators, Problem Solvers and Engagers. Each of these learning strategy groups have two subgroups.

### Navigators

Conti and Kolody (1998) described the Navigators as follows:

**Description:** Focused learners who chart a course for learning and follow it. Subgroup 1 likes to use human resources while subgroup 2 is more concerned with the organization of the material into meaningful patterns.

**Characteristics:** Focus on the learning process that is external to them by relying heavily on planning and monitoring the learning task, on identifying resources, and the critical use of resources.

**Instructor:** Schedules and deadlines helpful.

Outlining objectives and exceptions, summarizing main points, giving prompt feedback, and preparing instructional situation for subsequent lessons.



## Problem Solvers

Conti and Kolody (1998) described the Problem Solvers as follows:

**Description:** Learners who rely heavily on all the strategies in the area of critical thinking. Subgroup 1 likes to plan for the best way to proceed with the learning task while subgroup 2 is more concerned with assuring that they use the most appropriate resources for the learning task.

**Characteristics:** Test assumptions, generate alternatives, practice conditional acceptance, as well as adjusting their learning process, use many external aids, and identify many of the resources. Problem Solvers like to use human resources and usually do not do well on multiple-choice tests.

**Instructor:** Provide an environment of practical experimentation, give examples from personal experience, assess learning with open-ended questions and problem-solving activities.

## Engagers

Conti and Kolody (1998) described the Engagers as follows:

**Description:** Passionate learners who love to learn, learn with feeling, and learn best when actively engaged in a meaningful manner. Subgroup 1 likes to

use human resources while subgroup 2 favors reflecting upon the results of the learning and planning for the best way to learn.

**Characteristics:** Must have an internal sense of the importance of the learning to them personally before getting involved in the learning. Once confident of the value of the learning, likes to maintain a focus on the material to be learned. Operates out of the affective domain related to learning.

**Instructor:** Provide an atmosphere that creates a relationship between the learner, the task, and the teacher. Focus on learning rather than evaluation and encourage personal exploration for learning. Group work also helps to create a positive environment.

#### Summary

This literature review has queried three mutually reinforcing areas. First it was established that community oriented policing is driving fundamental change in the policing profession. With the emergence of community policing factors such as training and general learning strategies become increasingly important. The current state of police training, which is largely behavioral in nature, will be deficient in teaching and fostering the skills needed for community policing. It is also evident that learning under this model may be a spurious notion.

Not only are most police training environments behavioral in nature but they also tend to be rigid, paramilitary, punitive and highly structured. Most academic treatments of this type of police organizational environment have been highly critical. Not only are these characteristic of many police training academies but have also been found to be deeply entrenched in the police organizational culture. These factors will have a less than desirable impact on individual and organizational learning. Furthermore, these factors may restrict the various learning strategies that police officers may use to learn and solve problems.

Second, it is well established that adult learning principles are more congruent to effective learning, particularly, humanistic education principles such as andragogy. It is recognized that andragogy with its emphasis on self-directed learning and life experience on the part of the learner can greatly enhance learning and is a viable strategy for police training. Furthermore, it is clear that learning styles are well documented in the empirical literature but what remains to be investigated is the identification of learning strategy usage among police officers.

If learning strategies among police officers can be identified, police trainers and executives will be placed in an advantageous position when fostering community oriented policing within their organizations. At the present time

there have been a number of studies that have found distinct patterns of learning strategies exist among groups of people from a diverse of occupations.

It has been well established in the literature that community policing requires fundamental change in the police occupation including the current state of training. Furthermore, it is well established that adults learn best when they are self-directed and allowed to bring their life experiences into the classroom. Finally, learning strategies research will be advantageous in assisting adult educators, trainers and executives of organizations to more appropriately foster learning based on the predominate learning strategies among adult learners.

## CHAPTER III

### METHODOLOGY

#### Introduction

Learning strategy identification appears to be one avenue to more effectively tailor instructional methods to adult learners (Conti & Kolody, 1998). This area of research has sparked an exuberant amount of interest among adult education scholars and doctoral students alike (e.g., Conti & Kolody, 1995; Conti & Kolody, 1996; Hays, 1995; Hill, 1991; James, 2000; Korinek, 1997; McKenna, 1991; Moretti, 1995; Yubui, 1993). An understanding of learning strategies has relevance in a wide variety of disciplines in the academic setting, the workplace, and in informal learning endeavors that individuals engage in on a daily basis.

This study will continue the empirical evaluations into learning strategy usage among adults. More specifically, this study investigated learning strategies used by police officers. The Assessing the Learning Strategies of Adults (ATLAS) instrument was utilized to identify learning strategies among a sample population of police officers. A one-way analysis of variance (ANOVA) was utilized to study the relationship between learning strategies and selected

demographic variables. A Pearson chi-square test was calculated to check for significant differences in learning strategies based on race and job assignment. A discriminant analysis test was calculated to examine the participants on several variables to determine if any of them interact in a combination that can explain the participants' placement in the learning strategy group. According to Conti (1993), "discriminant analysis is concerned with the grouping of people and with analyzing the interrelationship of multiple variables to determine if they can explain a person's placement in a specific group" (p. 91). Similarly, Klecka (1980) asserted that, "discriminant analysis is a powerful multivariate statistical procedure for examining the difference between two or more groups of objects with respect to several variables simultaneously" (p. 5).

#### Research Design

This study utilized a descriptive design. As Merriam (1988) pointed out, descriptive research is undertaken when description and explanation (rather than prediction based on cause and effect) are sought, when it is not possible or feasible to manipulate the potential causes of behavior, and when variables are not easily identified or are too embedded in the phenomenon to be extracted for study. This study was concerned with the learning strategy preferences of police officers. Therefore, a descriptive study was the most

appropriate means in which to explore and describe learning strategies among police officers.

According to Dixon, Bouma and Atkinson (1987) a descriptive study may be of one person, one group, one family, one classroom, one town or one nation and that the aim of a descriptive study is description. Gay (1996) asserted that "descriptive research involves collecting data in order to test hypotheses or answer questions concerning the current status of the subject of the study. A descriptive study determines and reports the way things are" (p. 14). Similarly, Singleton and Straits (1999) reported:

The objective of a descriptive study, as the name implies is to describe some phenomenon...it focuses on relatively few dimensions of a well-defined entity and measures these dimensions systematically and precisely, usually with detailed numerical descriptions. The information is gathered from a set of cases that are carefully selected to enable the researcher to make estimates of the precision and generalizability of the findings. (p. 91)

Many descriptive studies are exploratory in nature. The objective in this sense is to explore and ascertain the relevant variables to a particular study. Descriptive studies may additionally be conducted to help formulate a hypothesis for later study.

Sommer and Sommer (1991) asserted that descriptive studies have a long and honorable history and that these studies may be used to test a broad range of theories. It is the researcher's assumption that by going directly to a police population and querying learning strategies that a

deeper and fuller understanding of this phenomenon may be gleaned. Some scholars have cited that this is a key strength of field research such as a descriptive study (see Babbie, 1983, p. 244).

This study is a descriptive design because the researcher will be querying learning strategy preferences of police officers from one specific police organization. Therefore the researcher will describe learning strategy preferences of these police officers.

### Selection of Subjects

#### Population

The population for this study was police officers serving with the Wichita Police Department located in Wichita, Kansas. At the time of this study, the Wichita Police Department employed 600 commissioned police officers. Fifty male and female police officers assigned to traditional patrol duties were randomly selected and all police officers (n=31) assigned to the community policing unit were selected. Fifty police officers were randomly selected from traditional patrol assignment by using the Wichita Police Department data system.

The researcher obtained assistance from police personnel assigned to the planning and research section who programmed the computer to randomize 50 officers assigned to traditional police patrol. These names were then provided to the researcher. Initially the researcher had anticipated



50 community-policing officers would participate in the study. However, when the Wichita Police Department roster was examined, it was revealed that several of the community policing officers were at the rank of supervisor and they were not included in this study.

This study only gleaned data from those participants at the rank of police officer. Furthermore, it was discovered that several of the community policing officers were promoted or reassigned to other areas which limited the community policing sample to 31 officers.

Of the 50 completed ATLAS forms collected from the officers assigned to traditional patrol, one was discarded due to the participant completing it improperly. This made a sample of 49 traditional patrol officers. The Wichita Police Department employs 600 commissioned police officers. The total research sample in this study was (N=80) police officers; this represents 13% of the Wichita Police Department. Gay (1996) related that as a general rule for descriptive studies, 10-20% sample population is sufficient. Dixon, Bouma & Atkinson (1987) and Babbie (1983) asserted that if the population of the sample is fairly homogenous, a smaller sample size can be relied on than if the population is highly variable. The population in this study is police officers. The researcher assumes that their relative characteristics are fairly evenly distributed. Hence, this research population is fairly homogenous in nature. Wichita Police officer attend a uniform training academy, abide by

the same standard operating procedure, all Wichita Police Officers are at least 21 years of age, and are supervised by one clear and distinguishable chain of command.

### Research Instrument

Learning strategies for the sample was measured by administering the Assessing the Learning Strategies of Adults (ATLAS) instrument to participants (see appendix B). Personal data was obtained from participants by having them complete a brief bibliographical data sheet (see appendix B).

#### Description and Validation of ATLAS

The ATLAS instrument can be completed rapidly by both facilitators and learners. Depending on reading level, ATLAS can be completed in approximately two minutes. ATLAS utilizes a flow-chart design. On the original form for the instrument, items are printed on colored cards which are quarter sheets of a standard sized, 8.5" x 11" page. Sentence stems, which are in the top box on the page, lead to options in other boxes, which complete the stems. Connecting arrows direct the respondent to the options. Each option leads the respondent to another box which either instructs the respondent to proceed to another colored card or provides information about the respondents correct learning strategy group placement (Conti & Kolody, 1998).

While the original ATLAS was printed on quarter sheets of paper and placed in an envelope, the current form utilizes a small spiral notebook that is attractive to the eye and contains the instrument. This adds to the convenience for both ATLAS facilitators and participants. The new ATLAS notebook design reduced the risk of losing pages of the instrument and keeps the instrument in order. Furthermore, the new ATLAS design reduces the amount of preparation time normally involved with the older version of ATLAS in which the researcher was required to place each of the cards in order into an envelope. The new ATLAS notebook design was utilized in this study.

The Self-Knowledge Inventory of Lifelong Learning Strategies instrument was the forerunner to ATLAS and was developed to measure learning strategies in the areas of metacognition, metamotivation, memory, critical thinking, and resource management (Conti & Fellenz, 1991). Since the development of SKILLS, numerous studies with diverse populations have been conducted (Conti & Fellenz, 1991).

Collectively, these studies have found that selected demographic variables are not useful in discriminating among different groups in their learning strategy usage (Conti & Kolody, 1995, 1997). However, these studies consistently identified three distinct groups of learners by the patterns of learning strategies used when cut across the variables such as gender and age which are typically used to group people in educational studies (Conti & Kolody, 1998). The

three groups have been named Navigators, Problem Solvers and Engagers. From the SKILLS instrument, the ATLAS instrument was conceived which places subjects into one of the three learning strategy groups.

An instrument used in behavioral and social science research must be valid. "Whether you are testing hypotheses or seeking answers to questions, you must have a valid, reliable instrument" (Gay, 1996, p. 133). Validity is the degree to which an instrument or test measures what it is supposed to measure and is broken down into construct, content and criterion-related validity.

#### Construct Validity

Conti and Kolody (1998) commented that the ATLAS instrument has been validated in the areas of construct validity, content validity and criterion-related validity. Construct validity assesses whether the instrument can be shown to measure hypothetical constructs which explain some aspect of human behavior (Borg & Gall, 1983, p.280). The process of establishing construct validity for ATLAS was to synthesize the results of the numerous research studies, which utilized SKILLS and to consolidate these results (Conti & Kolody, 1998).

#### Content Validity

Content validity refers to the degree to which a test measures an intended content area (Gay 1996, p. 139). Conti

and Kolody (1998) asserted that the content validity for ATLAS is concerned with the degree to which the items are representative of learning strategy characteristics of the three groups identified in the SKILLS data base (e.g., Navigators, Problem Solvers, Engagers).

A structured matrix of a discriminate analysis for these three groups revealed that the major process, which separated the groups, related to how each group sought to accomplish the learning task. The Navigators and Problem Solvers initiate a learning task by looking externally to the resources that will help them accomplish the learning task. Engagers, on the other hand, look to themselves internally to determine whether they will enjoy the learning task enough to finish it (Conti and Kolody, 1998, p. 111).

Conti and Kolody (1998) related that the learning strategies associated with the Navigators and Problem Solvers are Identification of Resources and the Critical Use of Resources. Those utilized more extensively by the Engagers are Confidence and Reward. According to Conti and Kolody (1998), there was 96.1% accuracy in discriminating between the Navigators and Problem Solvers as one group and the Engagers as another

#### Criterion-Related Validity

Criterion related validity refers to the degree to which the scores on a test related to the scores on another already established test administered at the same time or to

some other valid criterion available at the same time (Gay, 1996, p. 141). Conti and Kolody (1998) related that criterion related validity for the ATLAS instrument was established by comparing ATLAS scores to actual group placement using SKILLS. Groups of adult learners in Montana and Oklahoma were administered both SKILLS and draft versions of ATLAS. After completing the instruments, comments concerning ATLAS were gathered by means of individual interviews and group discussions. Suggestions were taken into consideration in improving ATLAS. The current version of ATLAS correctly places approximately 70% of the respondents in their corresponding SKILLS group (Conti & Kolody, 1998, p. 113). Follow-up studies by the authors now reveal that over 90% of those taking ATLAS confirm that the description of the group in which they were placed by ATLAS accurately describes their approach to learning (Personal communication with Dr. G.J. Conti, May 2000).

The ATLAS is a statistically sound and valid instrument which may be used for assessing the learning strategies of adults. The ATLAS can be used to quickly identify a person's group membership for learning strategy usage. Although ATLAS appears to be a very simple instrument, it is important to note that its contents are based on powerful multivariate statistical procedures.

## Research Design

The current study is a descriptive design. Fifty male and female police officers assigned to traditional patrol duties were randomly selected, and all 31 male and female police officers assigned to community policing duties were selected. After obtaining the ATLAS data back from participants, one traditional patrol questionnaire was discarded due to the form being incomplete. The total research sample was 80 police officers serving with the Wichita, Kansas Police Department. Permission to conduct the study at the Wichita Police Department was obtained in writing from the chief of police of this organization (see appendix A).

The participants were administered in both small and large groups the ATLAS instrument to assess their learning strategies. Furthermore, participants were asked to complete a brief demographic questionnaire. This questionnaire queried information pertaining to gender, race, job assignment, experience and educational attainment (see appendix B).

## Data Analysis

Both descriptive and inferential statistics were used in this study. First, basic descriptive statistics provide demographic information about the participants (i.e., duty assignment, gender, race, age, and educational status).

Second, the data obtained from the ATLAS instrument were analyzed utilizing a one-way analysis of variance. Gay (1996) asserted that a one-way ANOVA is used in a study to determine whether there is a significant difference between two or more means at a selected probability level.

This study investigated the differences in learning strategies of police officers assigned to traditional patrol duties and police officers assigned to community oriented policing duties. Furthermore, analyses were engaged to determine if there are significant differences in the learning strategies of police officers by gender and education status.

For these analyses, the criterion of .05 alpha level of significance was used. The .05 level is commonly employed in behavioral and social science research. It is also an appropriate alpha level in ex-post facto (descriptive studies) such as this one (Roscoe, 1975; Sommer & Sommer, 1991). The Statistical Package for Social Sciences (SPSS), a computer statistics program, was used to analyze the statistical data.

It should be noted that it is recognized that gender is nominal (categorical) data and it would appear to be appropriate to utilize a chi-square test for independence. However, according to the Statistical Package for the Social Sciences, Second Edition (S.P.S.S) ANOVA is acceptable:

A dichotomy is a variable with only two possible categories or values, such as sex (male or female). While some dichotomies are based on natural ordering, many have no inherent basis on



which either category could be judged superior. Although a rank order may not be inherent in the category definitions, either arrangement of the categories satisfies the mathematical requirements of ordering (it does not matter which end of ranking is considered "high" and which is "low.") The requirement of a distance measure based on equal-sized intervals is also satisfied because there is only one interval naturally equal to itself. Consequently, a dichotomy can be treated as a nominal, ordinal, or interval-level measure, depending on the research situation. (pp. 5-6)

In light of this information, ANOVA was utilized to analyze the relationship between learning strategies preference and, male and female police officers, community police assignment and traditional patrol assignment, educational status, and years of experience.

## CHAPTER IV

### FINDINGS

#### General

Data were collected from 80 police officers employed by the Wichita, Kansas Police Department who were administered the Assessing the Learning Strategies of Adults (ATLAS) instrument. Of these, 31 (39%) participants were assigned to community policing duties and 49 (61%) were assigned to traditional patrol duties. There were a total of 71 (88%) male participants and 9 (12%) female participants. Twenty-four (30%) of the participants were a member of a minority group and the remaining 56 (70%) were white. Specifically, 12 (15%) were African American, 2 (3%) were Asian American, 5 (6%) were Hispanic, 5 (6%) were other (Native American, Pacific Islander), and 56 (70%) were white. Table 4.1 depicts a demographic summary of the participants in this study.

Table 4.1

## Participants Job Assignment and Racial Demographics

Job Assignment	African American	Asian American	Hisp.	White	Other	Total
Patrol	6	0	4	37	2	49
C.O.P.	6	2	1	19	3	31
Total	12	2	5	56	5	80

Note: C.O.P. = Community Oriented Policing Assignment

Years of police service of participants were recorded as experience. The mean experience relative to years of service was 6.46 and the standard deviation was 4.68. The range of years of experience of the participants was 1 to 20. The median years of experience of the participants were 5.0. Table 4.2 depicts the frequencies, percentages and the range years of experience of the participants in this study.

Table 4.2

## Years Police Experience of Participants

Years Experience	Frequency	Percent	Cumulative Percent
1	9	11.3	11.3
2	5	6.3	17.5
3	12	15.0	32.5
4	10	12.5	45.0
5	8	10.0	55.0
6	4	5.0	60.0
7	3	3.8	63.8
8	2	2.5	66.3
9	0	12.5	78.8
10	5	6.3	85.0
11	1	1.3	86.3
12	2	2.5	88.8
13	3	3.8	92.5
14	0	0	0
15	1	1.3	93.8
16	1	1.3	95.0
17	0	0	0
18	2	2.5	97.5
19	0	0	0
20	2	2.5	100.0
Total	80	100	

The educational levels of the participants ranged from a high school diploma or its equivalent to a master's degree. Specifically, 31 participants reported that they possessed a high school diploma, 15 reported possessing an associate's degree, 33 reported holding a bachelor's degree, and 1 participant reported holding an earned master's degree. Table 4.3 depicts the data pertaining to the frequency and percentages of educational levels of the participants in this study.

Table 4.3  
Educational Levels of Participants

Education Level	Frequency	Percent	Cumulative Percent
High School	31	39	39
Associates Degree	15	19	58
Bachelors Degree	33	41	99
Master's Degree	1	1	100
Doctoral Degree	0	0	0
Total	80	100	

The age of the participants ranged from 23 to 47. The mean age of participants was 33 and the median age was 33. The standard deviation of participants age was 6 (see table4.4).

Table 4.4  
Age of Participants

Age	Frequency	Percent	Cumulative Percent
23	2	2.5	2.5
25	6	7.5	10.0
26	8	10.0	20.0
27	4	5.0	25.0
28	1	1.3	26.3
29	4	5.0	31.3
30	5	6.3	37.5
31	3	3.8	41.3
32	6	7.5	48.8
33	6	7.5	56.3
34	6	7.5	63.8
35	8	10.0	73.8
36	4	5.0	78.8
37	4	5.0	83.8
38	1	1.3	85.0
39	2	2.5	87.5
41	3	3.8	91.3
42	1	1.3	92.5
43	3	3.8	96.3
44	1	1.3	97.5
46	1	1.3	98.8
47	1	1.3	100.0
Total	80	100.0	

#### Learning Strategy Frequencies

The Assessing the Learning Strategies of Adults Instrument (ATLAS) was administered to the 80 participants. After completing the ATLAS, participants were placed in their specific learning strategy group. The results indicated that participants were dispersed in each learning strategy group (e.g., Problem Solvers, Navigators, and Engagers). Fifty percent of participants were Problem

Solvers, 23.8% were Navigators and 26.3% were Engagers (see table 4.5).

Table 4.5

Learning Strategies - Overall Placement of Participants

Learning Strategy	Frequency	Percent	Cumulative Percent
Problem Solvers	40	50.0	50.0
Navigators	19	23.7	73.8
Engagers	21	26.3	100.0
Total	80	100.0	

The participants were dispersed in each learning strategy sub-groups. Recall that the ATLAS is designed to place participants into one of two subgroups within their learning strategy. It would be expected that each sub-group would have 50% placement. Of the 40 Problem Solvers, 50% were placed in sub-group one and 50% in sub-group two. Of the 19 Navigators, 13.8% were placed in sub-group one and 10% were placed in subgroup two. Of the 21 Engagers, 13.8% were placed in sub-group one and 12.5% in subgroup two. Table 4.6 further depicts the placement of participants into each learning strategy sub-group.

Table 4.6

Learning Strategies - Sub Group Placement of Participants

Learning Strategy	Frequency	Percent	Cumulative(%)
Problem Solver			
Sub Group 1	20	25.0	25.0
Sub Group 2	20	25.0	50.0
Navigator			
Sub Group 1	11	13.8	63.8
Sub Group 2	8	10.0	73.8
Engager			
Sub Group 1	11	13.8	87.5
Sub Group 2	10	12.5	100.0
Total	80	100.0	

Table 4.7 depicts the learning strategy group placement based on the job assignment of the participant.

Table 4.7

Learning Strategies - Placement Based on Job Assignment

Learning Strategy	Patrol	COP	Total (N)
ATLAS Group			
Problem Solvers	20	20	40
Navigators	13	6	19
Engagers	16	5	21
Total	49	31	80

Note: COP = Community Oriented Policing Assignment

Chi-Square Analyses

“Chi-square is a non-parametric test of significance appropriate when the data are in the form of frequency



counts (or percentages or proportions which can be converted to frequencies) occurring in two or more mutually exclusive categories” (Gay, 1996, p. 483). A chi-square test compares proportions actually observed in a study with proportions expected to see if they are significantly different.

Likewise, “chi-square analysis is a test of the independence of the relationship between nominal or categorical variables” (Hagan, 1993, p. 341). For example, chi-square analysis queries whether two variables are independent, exhibit no relationship or an association due to chance, or are dependent where the relationship is real and would seldom occur due to chance alone. Three Pearson's chi-square analyses for independence were conducted in this study.

#### Chi-Square Analysis of Job Assignment and Learning strategy

A chi square test was calculated checking for significant differences in learning strategies between the participants based on job assignment (e.g., traditional patrol and community policing). No differences were found ( $\chi^2 = 4.520, df=2, p > .05$ ). The participants placement in the three learning strategy groups based on job assignment were unrelated to job assignment.

### Chi-Square Analysis of Race and Learning Strategy

The second chi-square analysis examined ATLAS group placement based on race. The researcher was interested in investigating if race was a factor in determining the learning strategy group placement among participants. The participants were asked to place themselves into one of five categories of race (i.e. African American, Asian American, Hispanic, White/Non Hispanic and Other). Based on these categories, a chi-square test was calculated. No differences were found ( $\chi^2 (4) = 6.042, p > .05$ ). The participants choice of learning strategies was unrelated to race.

### Chi-Square Analysis of current Data By National Norm Data

In chapter three there was a discussion pertaining to the construct validation of ATLAS. The construct validity for ATLAS was established by reviewing studies actually using SKILLS in field-based research. This resulted in the identification of three groups with similar patterns of learning strategy usage. Because of their similarity to groups in a number of prior studies, these groups have been named Navigators, Problem Solvers, and Engagers. Collectively the distribution among the three groups was relatively equal: Navigators -- 36.5%, Problem Solvers --

31.7%, and Engagers -- 31.8% (Conti & Kolody, 1995, p. 18). In light of the findings of prior studies, it was expected that the current study would reveal similar results.

The third chi-square analysis was calculated to check for a significant difference in the observed number of learning strategy group placement in the current study and the expected number gleaned from the national norm data. This analysis revealed a significant difference in the data gleaned in this study compared to the national norm data for ATLAS (see table 4.8).

Table 4.8

Observed Learning Strategy Group Placement and Expected Group Placement Based on National ATLAS Norm Data.

Learning Strategy	Observed	Expected
Navigators	19	25.4
Problem Solvers	40	29.2
Engagers	21	25.4
Total (N)	80	

\* ( $\chi^2 = 12.79$ ,  $df = 2$ ,  $p = .002$ )

#### Analysis of Variance

The purpose of the one-way analysis of variance (ANOVA) is to compare the means of two or more groups in order to decide whether the observed differences between them represent a chance occurrence or a systematic effect (Shavelson, 1996, p. 371). "The analysis of variance is an inferential tool that has been used in a number of disciplines" (Huck & Cormier, 1996, p. 295). Analysis of

variance can be used when a researcher wants to compare two means, three means, or any number of means.

“A one way ANOVA has one independent variable, it focuses on one dependant variable, and it involves samples that are independent” (Huck & Cormier, 1996, p. 300). In essence the participants who provide scores or data in any given group must be different from subjects who provide data in a comparison group. The theoretical underpinning of ANOVA is that variances in scores can be attributed to either a variance between groups or a variance within groups.

Years of Job Experience

A one-way analysis of variance was calculated to check if there was a significant difference in learning strategy preference by the years of job experience of participants. As table 4.10 reveals, no significant differences were found.

Table 4.9

ANOVA of Learning Strategies Preference by Years of Job Experience

Variable	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between	21.656	2	10.828	.488	.616
Within	1708.231	77	22.185		
Total		79			

## Gender

A one-way analysis of variance was calculated to query if there was a significant difference of learning strategies preference by gender. Nie et. al. (1975) discussed in the Statistical Package for the Social Sciences, Second Edition (SPSS) dichotomous variables. A dichotomous variable is one that has only two possible categories such as gender (male and female). Some variables are based on natural ordering and many have no inherent basis on which either category could be judged superior. Although a rank ordering may not be inherent in the category definitions, either arrangement of the categories satisfies the mathematical requirements of ordering (Nie et al., 1975, pp. 5-6). Hence, it does not matter which end of the ranking is considered high and which is considered low.

The requirement of a distance measure based on equal-sized intervals is also satisfied because there is only one interval naturally equal to itself. Consequently a dichotomy can be treated as a nominal, ordinal, or interval-level measure, depending on the research situation (Nie, et al., 1975, pp. 5-6).

Because this study did not rank gender in high or low categories and because the requirement for a distance measure based on equal sized intervals is satisfied, a one-way ANOVA was conducted to query significant differences of learning strategies placement based on gender. As table 4.11 reveals, no significant difference in learning

strategies preference by gender was found. This indicates that male and female police officers did not differ significantly on learning strategy usage.

Table 4.10

ANOVA of Learning Strategy Preference by Gender

Variable	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between	.185	2	9.247	.913	.406
Within	7.803	77	.101		
Total		79			

Education

A one-way analysis of variance was calculated on the learning strategy preference by education level of the participants. As table 4.12 reveals there were no significant differences in learning strategies group preference by educational levels of the participants.

Table 4.11

ANOVA of Learning Strategy Preferences by Educational Levels

Variable	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between	1.414	2	.707	.734	.483
Within	74.136	77	.963		
Total		79			

## Age

A one-way analysis of variance was calculated to investigate differences in learning strategy preference by the age of the participant. As table 4.13 reveals, there were no significant differences based upon learning strategies group placement and the age of participants.

Table 4.12

### ANOVA of Learning Strategies by Age of Participants

Variable	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between	80.309	2	40.155	1.249	.293
Within	2475.891	77	32.154		
Total		79			

### Discriminant Analysis

This study is one of several studies conducted at Oklahoma State University and the Montana State University Adult Education/Center for Adult Learning Research. These studies utilized the ATLAS instrument and its forerunner SKILLS to examine adult learning in light of learning strategy preferences. This study is patterned after earlier studies. In order to facilitate the examination of results of the current research with earlier ones, the write-up of the results parallels earlier studies (Kolody, 1997; Lockwood, 1997).

Demographic data were obtained from all 80 police officers who participated in this study. This demographic data were the basis for the groups on which the deiscriminant analysis was run.

Discriminant analysis is "a statistical technique which allows the investigation of the differences between two or more groups in relationship to several variables simultaneously" (Klecka, 1980, p. 7.) In discriminant analysis as with other multivariate techniques, the emphasis is upon analyzing the variables together rather than singly. In this way, the interaction of multiple variables can be considered. "Discriminant analysis is useful when known and distinct groups exist" (Conti, 1993, p. 91).

Discriminant analysis can be used either to describe the way groups differ or to predict membership in a group. In this study, discriminant analysis was used to describe the combination of variables that could be used to distinguish the three groups of learning strategies (i.e., Engagers, Navigators, and Problem Solvers). Thus, for purposes of analysis, the 80 participants were placed in three learning strategies groups. One group of 21 contained individuals who after completing the ATLAS instrument were placed in the Engager learning strategy group. The second group of 19 after completing the ATLAS instrument were placed in the Navigator learning strategy group. The third group of 40 after completing the ATLAS instrument were placed in the Problem Solver learning strategy group.



Two criteria were used for judging whether it is possible to discriminate between learning strategy groups using variables related to gender, race, job assignment, education and age. The first criterion was that the discriminant function produced by the analysis had to be describable using the structure coefficients with a value of .3 or greater. The second criterion was that the discriminant function had to correctly classify at least 50% of the cases in the analysis.

The first criterion was necessary because the formula for discriminant analysis produces a discriminant function regardless of whether the function is meaningful. The structure matrix contains the coefficients which show the similarity between each individual variable and the overall discriminant function. If several of the variables do not have a coefficient of at least .3, it is impossible to discern the meaning of the function. In analyses which use a large number of variables, it is possible to get functions which have high predictive ability but which correlate with so many of the variables that it is impossible to decipher the meaning of the function. Therefore, this criterion places a logical restriction on the interpretation of the statistical output which requires that it must have clarity in order to be used.

The second criterion demands that the discriminant function account for a significant amount of variance before it can be used to support a generalization. Since the

analysis contained three groups, the percentage of correct classification of cases into a group if placements were made randomly was 33.3%. The criterion level of 50% is a 17% increase over a chance assignment. Thus, in order for the discriminant function to be acceptable, it had to account for at least one-half of the variance available over a chance assignment of individuals to a group.

Together these two criteria require that the results of a discriminant analysis be meaningful before they can be used. Analyses which use a large number of variables, can produce functions which have high classification percentages but which offer no clear descriptive power. On the other hand, some analyses produce functions which can be clearly described but which have low classification power. Therefore, in combination these two criteria require that the function be both clearly descriptive and highly accurate in order to be used to support the hypothesis.

For purposes of the discriminant analysis, the participants were divided into the Engager learning strategy group, the Navigator learning strategy group, and the Problem Solver learning strategy group. The set of discriminating variables used to predict placement in these groups consisted of age, gender, education, job assignment and experience. For clarity, the area of education pertained to the current educational levels of the participants; the area of job assignment pertained to whether the participant was assigned to traditional patrol

or to community oriented policing. The analysis contained a total of five separate variables: age, gender, education, job assignment and experience.

The pooled within-groups correlations are the correlations for the variables with the respondents placed in their groups of either Problem Solvers, Engagers or Navigators. The pooled within-groups correlation matrix of discriminating variables was examined because interdependencies among variables is important in most multivariate analyses. That is, in order for multiple variables to be included in an analysis, they should not be sharing variance; a high correlation indicates that variables are indeed accounting for the same variance. The within-groups matrix reveals how the discriminant function is related to the variables within each group in the analysis. The examination of the 20 coefficients in this analysis showed that all were at a sufficiently weak level to retain the variables in the analysis. Therefore, the 20 coefficients in this study were not strongly correlated. Only 2 coefficients were at the .7 level; 3 were at the .2 level; 2 were at the .1 level; 5 were at the .07 level; and the remaining 8 were all below the .04 level. Thus, the variables in this discriminant analysis were not related to each other and consequently were not sharing a common variance.

Standardized discriminant function coefficients are used to determine which variables contribute most to the

discrimination between the groups. By examining the standardized coefficients, the relative importance of each variable to the overall discriminant function can be determined. The standardized coefficients for this function which discriminated the three learning strategies groups were as follows: age (1.1); years of experience (-.84); job assignment (-.53); gender (.43); and education levels (-.16). Thus, age, years of experience and job assignment are more important than education and gender in discriminating between the three learning strategies groups. For example, years of police experience is twice as important as gender and five times more important than education levels when discriminating between the learning strategy groups.

The percentage of cases correctly classified shows how beneficial the discriminant function was in grouping the respondents. This discriminant function was 50% accurate in classifying two cases. It would be expected that about 33.3% of the cases would be placed into each learning strategies group by chance. The discriminant function correctly placed 17 of 40 (42.5%) in the Problem Solver learning strategy group, 11 of 19 (57.9%) in the Navigator learning strategy group and 12 of 21 (57.1%) in the Engagers learning strategy group. Thus, the discriminant function is an overall 17% improvement over chance in predicting all group placement. Consequently, it demonstrates that the three learning strategies groups (Problem Solvers,

Navigators and Engagers) can be distinguished on the basis of demographic factors.

The discriminant function which was used to classify the cases and which can serve as guide for describing future placement of respondents into these groups was as follows:

$$D = 1.375 \text{ (gender)} + 0.204 \text{ (age)} - 0.179 \text{ (years of experience)} - 1.099 \text{ (job assignment/community policing or traditional patrol)} - 0.170 \text{ (educational level of participant)} - 5.171 \text{ (constant)}.$$

The group centroid for the Problem Solver learning strategy group was -.29, the group centroid for the Navigator learning strategy group was -.24, and the centroid for the Engagers learning strategy group was .78. The canonical correlation is a measure of the degree of association between the discriminant scores and the groups and was .4 for this study. When this is squared, it indicates that the groups explain 16% of the variation in the discriminant function.

The structure matrix contains the coefficients which show the similarity between each individual variable and the total discriminate function. The variables with the highest coefficients have the strongest relationship to the discriminant function. These coefficients are used to name the discriminant function because they show how closely the variable and the overall discriminant function are related. In a study such as this in which the discriminant analysis is used for descriptive purposes, this is the most important information related to discriminant functions which satisfy

the acceptance criteria. This elevated importance stems from the fact that interpreting the structure matrix results in naming the process that distinguishes the groups from each other. Since the overall purpose of discriminant analysis is to describe the phenomenon that discriminates the groups from each other, this logical process of giving meaning to the discriminant function by interpreting the structure matrix is central and critical to the whole process. In this interpreting process, variables with coefficients of approximately .3 and above are generally included in the interpretation.

Three variables had sufficient coefficients to be included in the interpretation of the meaning of the discriminant function. They were as follows: gender (.31), job assignment (-.40), and age (.36). Since the coefficients for all three variables were similar, they carried equal weight in naming the discriminant function. Two of the five variables (experience and education) had low coefficients of .2 each, therefore they were not used in the interpretation of the meaning of the discriminant function.

Based on the strength of these variables, this discriminant function was named Adapting to the New Paradigm. The variables of gender, job assignment and age were salient when naming this discriminate function. When these variables are examined simultaneously, they have an impact on the learning strategy group placement of participants. As table 4.9 indicates as age and gender move

in one direction, job assignment moves in the other direction. For example, those participants who are Problem Solvers appear to be male and fairly young (mean age 32.25). Further, Problem Solvers with these characteristics appear to be assigned to community oriented policing duties.

In contrast, the Engagers learning strategy group is not as young as Problem Solvers (mean age 34.29) and 19% of the female participants were associated with this strategy and 81% of the males. In viewing the discriminant function Adapting to the New Paradigm, the Engagers tended to be assigned to traditional patrol duties (76%), and this learning strategy group appeared to encompass the most females (i.e., 19%) when compared to the Problem Solver learning strategy group and the Navigator learning strategy group.

The Navigators were in the middle when viewed by age (mean age 31.68). Further, Navigators tended to be more oriented towards the job assignment of traditional patrol and were made up of 11% women and 89% male.

It is important to note that in this discriminant function, it is not any one variable independently which explains group placement, but it is a constellation of variables. In this study, the variables of job assignment, age, and gender were salient in naming the discriminant function and thus explaining learning strategy group placement.

Table 4.13

Variables Significant in Naming the Discriminate Function  
Adapting to the New Paradigm

Variable	Problem Solvers	Navigators	Engagers
Job			
Patrol	50%	68%	76%
COP	50%	32%	24%
Age	32.25	31.68	34.29
Gender			
Male	92%	89%	81%
Female	8%	11%	19%

Note: Patrol = Traditional Patrol Duties, COP = Community Oriented Policing Duties.

Thus, a discriminate analysis was calculated to test if age, race, job assignment, and educational level when examined simultaneously could explain learning strategy group placement. A recognizable discriminant function was produced which was accurate in classifying respondents into the correct learning strategy group and explains 16% of the variation in the discriminant function.

#### Summary

Three different statistical tests were used in evaluating the data. A chi-square was calculated to check for independence on various forms of categorical data (i.e., job assignment and race). Specifically, chi-square ( $\alpha=.05$ ) was calculated to determine if learning strategies group



preference among participants were independent of job assignment and race. Furthermore, a chi-square was calculated to check the observed data in this study with the expected data based on the national norm for ATLAS.

The chi-square calculations on the categories of race and job assignment were not significant. The chi-square analysis comparing the data in the current study to the national norm data was significant.

Discriminant analysis was calculated to deductively impose sense on the data and to determine if there were any variables that made a difference in the learning strategies group placement of participants. Furthermore, discriminant analysis allowed the researcher to examine several variables simultaneously such as age, years of job experience, gender, education and job assignment. A discriminant function was produced and subsequently named Adapting to the New Paradigm.

A series of one-way analysis of variance ( $\alpha=.05$ ) were calculated to query learning strategies group placement by years of experience, gender, age and educational levels of the participants. The analyses of variance were reported in four separate summary tables which each report a variable. The analyses of these variables were not significant in explaining learning strategy preference.

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Summary of Findings

The purpose of this study was to describe the learning strategies used by police officers. Specifically, the aim of this study explored differences in the learning strategy preferences of police officers assigned to community oriented policing duties compared with those officers assigned to traditional patrol duties. Furthermore, the study explored differences in learning strategies preference based on several variables (i.e., education, experience, race, gender, and age). The researcher was interested in investigating if these variables were significant when describing learning strategy group placement among participants.

The study included 80 police officers employed by the Wichita, Kansas Police Department. Of these, 24 (30%) reported being a member of a minority group and the remaining 56 (70%) were white. Seventy-one (88.75%) of the participants were male and nine (11.25%) were female. The mean age of the participants was 33. Of the 80 police officers, 31 (39%) reported possessing a high school diploma; 15 (19% reported possessing an associates degree;

33 (41%) reported possessing a bachelors degree; and 1 (1%) reported possessing an earned master's degree.

#### Summary of Findings - Research Question One

Research question one asked: What are the learning strategies of police officers employed by the Wichita, Kansas Police Department? There were a total of 40 (50%) of the police officers were Problem Solvers; 19 (23.8%) were Navigators; and 21 (26.3%) were Engagers.

Of the 40 Problem Solvers, 20 (50%) were Subgroup 1 and 20 (50%) were subgroup 2. Of the 19 Navigators, 11 (57.8%) were subgroup 1 and 8 (42.2%) were subgroup 2. Of the 21 Engagers, 11 were subgroup 1 and 10 were subgroup 2.

As a group, Wichita Police Officers fell predominately into the Problem Solver learning strategy group. In Chapter 3 the researcher discussed the national learning strategies norm group placements. Conti and Kolody (1995) found the national norm learning strategy group placement to be: Navigators - 36.5%, Problem Solvers - 31.7% and Engagers - 31.8%. The author would expect similar results in the current study.

A chi-square analysis was calculated to check for significant differences in the current study's observed learning strategies group placement compared with the expected learning strategies group placement based on the national norm. The chi-square calculation revealed a significant difference. It would appear based on these

data, that special populations such as police officers as in the current study, use different learning strategies when compared to the general population.

#### Summary of Findings - Research Question Two

Research question two queried the learning strategies used by Wichita, Kansas Police Officers. Specifically, the question asked: Is there a significant difference in learning strategies used by police officers assigned to traditional patrol and those assigned to community policing duties?

The total number of participants in this study was (n=80). Of these, 40 (50%) were Problem Solvers, 19 (23.8%) were Navigators and 21 (26.3%) were Engagers. Of these, 20 officers assigned to traditional patrol were Problem Solvers and 20 officers assigned to community policing were Problem Solvers. Thirteen (13) police officers assigned to traditional patrol duties were Navigators and six assigned to community oriented policing duties were Navigators. Sixteen (16) police officers assigned to traditional patrol duties were Engagers and five assigned to community policing duties were Engagers.

Because the variable of job assignment is nominal or categorical in form, a Pearson's Chi-square test for independence was calculated. The chi-square analysis revealed no significant differences in learning strategies based on the whether the participant was assigned to

traditional patrol or community policing duties. This means that job assignment and learning strategy usage are independent events. In other words, the job assignment of traditional patrol or community policing was not statistically significant regarding learning strategy usage.

This finding suggests that regardless if a police officer is assigned to traditional patrol or community oriented policing duties there are no significant differences in the learning strategies they use. In chapter 2 the researcher shed light on the current state of police training. Through that discussion it was well established in literature that police training is in large part conducted in a very paramilitary and behavioral manner. A large majority of police training is carried out in the lecture method with very little input on the part of the trainee.

Evolving community oriented policing strategies require officers to work in consort with the community in order to solve problems and perform a myriad of other service-related activities. Because officers spend a majority of their time on service related functions; skills such as problem solving, diversity, verbal and interpersonal communication, resources identification, conflict resolution, and mediation are used on a frequent basis.

Many of these skills are learned and enhanced informally on a daily basis by police officers in the field. These skills parallel with the tenets represented in the

ATLAS Problem Solver typology. Conti and Kolody (1998) described the characteristics of Problems Solvers as persons who test assumptions, generate alternatives, practice conditional acceptance, as well as adjust their learning process. Problem Solvers use many external aids and identify many of the resources they need to learn a new task or skill. Similarly, these are the same traits desired of police officers performing community oriented policing.

The problem is clear: police are expected to perform a very broad mandate and generate solutions to very complex community problems working in consort with the community. However, the traditional manner police are trained make it difficult to approach learning and problem solving using multiple approaches.

It would be appropriate for the police to practice many of the characteristics found in the Problem Solver learning strategy typology. The paramilitary and behavioral training approaches may prevent attributes from the Problem Solver learning strategy to be used. Police officers leave the academy programmed to operate one specific way, usually in robotic fashion. McCreedy (1983) found that "most police training programs are based on three precepts: it should closely follow the military training model, it should be a punishment-centered experience in which trainees must prove themselves and it should help screen out those who aren't up to par" (p.32).

Herein lies a major problem and may explain some of the insignificant findings of these data. The researcher believed that officers assigned to community policing would use the problem solver learning strategy as their primary strategy. The Problem Solver Learning strategy is compatible with the skills desired in community oriented policing. However, this was not found in this study. It was found that learning strategy preference and job assignment appear to be independent events, however, a statistical significant difference was found when comparing the total participant population in the current study to the national norm data. It appears overall as a group, participants fell predominately in the Problem Solving learning strategy group. However, this was not found when looking at specifically at individual demographic variables such as job assignment, age, education, experience and race.

It is desired that police officers especially those assigned to community oriented policing use many of the skills desired in the Problem Solving learning strategy. Police cannot be trained in a behavioral and paramilitary environment and expected to fully nurture into many of the traits found in the Problem Solver learning strategy.

Characteristics from the problem solving learning strategy are actually what are desired of today's police officer. For example, Dunham and Alpert (1989) argued that what is needed in police training academies is frank discussions, critical thinking and case studies of the

realities of field decision. Similarly, Dantzker et al, (1995) pointed out:

If the intent of community policing training is to produce fundamental changes in policing, then training materials and approaches must explicitly reflect and support those changes. Learning to think critically, to solve problems, or to share responsibilities with citizens is not fostered by authoritarian and non-interactive training techniques. (p. 50)

Training should produce police officers who can think rationally and critically, who have a refined aesthetic sense, and who are more concerned about prevention and service rather than solely crime fighting. These traits are saliently similar to those in the Problem Solver learning strategy.

#### Summary of Findings - Research Question Three

Research question three asked: Is there a significant difference between learning strategies preference by police officers that hold college degrees and those police officers without college degrees?

A one way analysis of variance (ANOVA) was calculated to query if there were differences in learning strategies based on the education of the participants. The ANOVA revealed no significant differences between learning strategy preference and educational levels of the participants.

This finding supports the argument made in the summary of research question two. It is clear according to these data that the education level of the participant was not



significant in describing learning strategy group placement. Furthermore, the researcher has discovered through the relevant literature that the paramilitary and behavioral nature of police training will not produce police officers that use the Problem Solver learning strategy. The tenants of the Problem Solver learning strategy are most conducive to the skills required in community oriented policing.

#### Summary of Findings - Research Question Four

Research question four asked: Is there a difference between learning strategy preference by gender?

A one-way ANOVA revealed no significant differences between learning strategies preference and gender. In Chapter 3 the researcher discussed the appropriateness of using an ANOVA calculation the variable of gender. It was pointed out that a dichotomy is a variable with only two possible categories or values, such as gender.

This finding is consistent with a host of other empirical evaluations pertaining to learning strategies preference by demographic variables including gender. These studies (i.e., Bighorn, 1997; Conti & Kolody, 1995; Cournage, 1998; Gallagher, 1998; Gehring, 1997; Hill, 1992; Kolody, 1997; Lockwood, 1997; McKenna, 1991; Moretti, 1995; Strakal, 1995; Ungricht, 1997; Yabui, 1993) have consistently found that selected demographic variables were not useful in discriminating among different groups of learners. However, these studies did reveal that

distinctive groups of learners exist when they are specifically identified by the learning strategies they use (Conti and Kolody, 1998, p. 109).

#### Summary of Findings - Research Question Five

Research question five asked: Are there differences in learning strategies preference by the race of police officers? Because race is in categorical form, a Pearson's Chi-Square test for independence was conducted. The chi-square analysis revealed no significance difference in learning strategies preference based on the race of the participant. The learning strategies participants used appear to be independent of their race.

As discussed in the summary findings of research question four, selected demographic variables such as race have not been useful at describing different groups of learners. This study found similar results in-as-much that race was not statistically significant in describing learning strategy preference.

#### Summary of Findings - Research Question Six

Research question six asked if there were differences in learning strategies group placement based on years of police experience. Specifically, research question six asked: Do years of police experience have an effect on learning strategy preference? A one-way ANOVA revealed no

significant differences between learning strategies group placement and years of police experience.

This finding is consistent to a study conducted by Korinek (1997) who investigated the learning strategies utilized by Air Force officers. Korinek found that the number of years of experience in the air force had no effect on officers' placement in a learning strategies group. Similarly, the current study found that years of experience had no effect on police officers placement in a learning strategies group.

#### Summary of Findings - Research Question Seven

Question seven queried if there were significant differences in learning strategy preference by the age of the participants. Specifically, question seven asked: Are there differences in learning strategy preferences based on the age of the police officer?

A one-way ANOVA revealed no significant differences were found between learning strategies preference and age. Even though participant police officers varied in ages, this was not a significant variable in determining learning strategy group placement.

This finding is consistent with other studies as cited in summary research question four. Other studies have collectively found that demographic variables such as age were not useful in determining learning strategies group placement. For example, Korinek (1997) investigated

learning strategies utilized by Air Force officers and found that officers between the ages of 31-40 and those between the ages 41-52 were not significantly different in learning strategy group placement.

#### Summary of Discriminant Analysis

A discriminant analysis was calculated to test if it was possible to use a variety of variables to discriminate between the three learning strategies groups, i.e., Problem Solvers, Engagers, Navigators. Because a recognizable discriminant function was produced which was accurate in classifying respondents into the Engagers, Navigators and Problem Solver learning strategies groups it was possible to view the variables that were relevant in placing respondents into their learning strategy groups.

It was determined from the calculation of the chi-square and the ANOVA that individual variables by themselves were not significant in describing learning strategy group placement. In this sense, a powerful multivariate procedure such as discriminant analysis proved to be useful in further understanding this complex phenomenon. The discriminant analysis allowed the researcher to examine multiple variables simultaneously to see if they could describe learning strategy group placement. Thus, a discriminant function was produced and subsequently named Adapting to the New Paradigm.

The Adapting to the New Paradigm process describes what is taking place within learning strategy group placement. The discriminant analysis revealed that age, gender and job assignment were significant in describing the process. For example, this process reveals that there was a trend towards those officers that were middle to younger in age and predominantly male to fall into the Problem Solver learning strategy group. The Navigators tended to be older than Problem Solvers and 11% of this group were female police officers. Further, Navigators had the highest mean years of job experience (7.11) when compared to the Problem Solvers and Engagers.

The Engagers were older than those police officers in the Navigator and Problem Solver groups. The Engagers group encompassed the largest amount of female representation (19%). Further, the Engagers were lower in years of job experience (mean 5.87) when compared to the Problem Solvers and Engagers.

Engagers are those persons that are passionate learners who love to learn with feeling, and who learn best when actively engaged in a meaningful manner. Engagers must have an internal sense of the importance of learning to them personally before getting involved in the learning. Once confident of the value of learning, they like to maintain a focus on the material to be learned. The instructor's role when facilitating to Engagers would be to create a

relationship between the learner, the task, and the teacher. Group work also helps to create a positive environment.

Upon applying the Engager typology to policing, the discriminant process becomes even clearer. Female police officers may very well desire to perform many of the tasks required under the community oriented policing philosophy. However, before they can do that they may feel like they have to be accepted in what has been historically a very male dominated profession. This clear gender disparity in policing has been problematic for female police officers to forge an identity into the profession. From the entry of the first sworn female into policing in 1910 until 1972, women officers were selected according to a different criterion from men. In many cases they were employed as police women and limited to working with women, children and typewriters (Martin, 1989; Milton, 1972). One of the instructor's roles with Engagers is to develop a relationship with the learner. Thus, if female police officers are trying to prove themselves to their supervisors and colleagues, they would most definitely desire a positive rapport and relationship. This relationship may be desired by the female police officer for assurance that she has been accepted into the police culture.

On the other hand, the Adapting to the New Paradigm process indicates that younger to medium aged males tend to gravitate towards the Problem Solver learning strategy. The Problem Solvers are learners who rely heavily on all the

strategies in the area of critical thinking. These learners may question assumptions, generate alternatives, practice conditional acceptance and may use external aids. In essence, this learning strategy allows for a generous amount of flexibility and experimentation. Hence, these skills and traits are highly desired in community oriented policing.

Male police officers may feel they can perform these tasks and do community policing because they do not face the problematic environment of being accepted into the profession as female police officers do. Female police officers may feel as if they have to prove themselves first by performing some of the traditional crime fighting (reactive policing) functions.

Within the discriminant function (Adapting to the New Paradigm) the Navigators were the youngest (mean age 31.68). Within this group, 88% were male and 12% were female. Sixty-eight percent were assigned to traditional patrol and 32% if the participants were assigned to community oriented policing.

Navigators are focused learners who chart a course for learning. They rely heavily on planning and monitoring the learning task. The instructor's role when facilitating for Navigators would be to schedule assignments and place deadlines. The instructor may also outline objectives and expectations, summarize main points, give prompt feedback, and prepare the instructional situation for subsequent lessons.

By applying tenants of the Navigator learning strategy to policing several conclusions can be drawn. First, the discriminant function revealed that Navigators were the youngest when compared to Problem Solvers and Engagers. In general, the younger a police officer is, the less experience he or she possesses. Thus, they will rely more on direction and instruction from a supervisor and may not take the risks that a Problem Solver would when making a decision. Navigators would most likely follow established police protocol, standard operating procedure, and ask for much direction. Furthermore, the dominate learning in police organizations is done in a very behavioral and paramilitary environment. Navigators would perform well in this environment because this type of learning environment is very structured and the instructors has total control of knowledge dispensing with very little input on the part of the learner.

This discriminant function suggested that those who use a Problem Solver learning strategy are prone towards community oriented policing tasks. For example, 50% of the Problem Solver group were made up of community police officers. This is readily seen when comparing the Problem Solver group to the number of community policing officers assigned to the Navigator group (23.8%) and the Engager group (26.3%). Thus, the Navigators and the Engagers may be adapting to the evolving community oriented policing paradigm.



It is recognized in general, that these percentages appear to be very small in relative terms of discriminating variables separating the learning strategy groups. For example, the mean age for Problem Solvers is 32.25, Navigators - 31.68 and Engagers - 34.29. The mean gender (with the numerical value of 1 for males and 2 for females) for Problem Solvers was 1.08, for Navigators - 1.11 and for Engagers - 1.19. In terms of job assignment, Problem Solvers are 50% community oriented policing and 50% traditional patrol assignment. Navigators are 68% traditional patrol and 32% community oriented policing assignment. Engagers are 76% traditional patrol and 24% community oriented policing assignment.

Once again, even though these values are relatively close in terms of separating the participants in learning strategy groups, the discriminant analysis indicated significance when analyzing the variables simultaneously. Thus, as age and gender move in one direction, job assignment moves in the opposite direction.

## Conclusions

### Empirical Antecedents

This study has major implications centering on the current debate over community oriented policing and how to effectively implement this evolving philosophy into American policing. Furthermore, this study sheds an additional

spotlight on the broader scholarship of learning strategy research and adult learning.

Learning strategy research has been conducted in a broad range of occupational settings. For example, there have been several studies which investigated the learning strategies utilized by college students (e.g., Bighorn, 1997; Conti & Kolody, 1995; Hill, 1992; Gallagher, 1998; Kolody, 1997; Strakal, 1995; Ungricht, 1997). Some scholars have focused research interest on nursing students (e.g., Lockwood, 1997) while others focused on business and non-profit organization leaders (e.g., Conti, Kolody, & Schneider, 1997; Courtnage, 1998; Gehring, 1997; Moretti, 1994). Both Korinek (1997) and Yabui (1993) examined the learning strategies used by military personnel. There have been studies in which learning strategies used by school administrators were investigated (McKenna, 1991), learning strategies used by senior citizens has also been investigated Qualres (1998), and Hays (1995) investigated the learning strategies used by learning disabled students. In one recent study, James (2000) investigated the learning strategies used by high school noncompleters. The current study represents the first known empirical evaluation that investigated the learning strategies utilized by police officers.

## Community Oriented Policing and Learning Strategies

The evolving philosophy of community oriented policing is a fundamental change in the way police deliver service to the community. Gutierrez and Thurman (1997) argued that as job descriptions move from reactive styles of policing to proactive styles, issues that relate to community policing training and performance become more important. For the most part, police training has not kept up with these changes and future demands.

Mclaughlin and Donahue (1995) asserted that community oriented police training is much different than traditional police training in topics such as firearms, defensive driving, executing search warrants, and effecting arrests. These authors further asserted that most traditional and current training is rigid, paramilitary, evolving from law, policies and procedures.

The discriminant analysis revealed the variables of age, job assignment and gender were salient in naming the discriminant function. Furthermore, 50% of the Problem Solvers were assigned to community oriented policing duties. It may very well be that when officers are assigned to community policing they have to adjust to many of the tenants found in the Problem Solver learning strategy due to the very nature of the task required in community policing (e.g., solving problems, utilizing resources, critical thinking, working with citizens).

The Problem Solver learning strategy is very similar to those skills required in community policing. Drawing from a synthesis of Conti and Kolody's (1995, 1997) research on learning strategies and the general community policing literature as it pertains to the evolving traits desired of police officers, Table 5-1 has been prepared to compare and exemplify the similarities between community policing strategies and traits in the Problem Solver learning strategy. As Table 5.1 reveals, the Problem Solver learning strategy and the skills and traits desired for community oriented policing closely parallel each other. Furthermore, many of the names of the Problem Solver learning process and the community policing process are the same.

Table 5.1

Comparisons between Skills/Traits in the Problem Solver Learning Strategy and Community Oriented Policing

Problem Solver-Learning Strategy	Community Oriented Policing
Critical thinking	Critical thinking
Generate alternatives	Generate alternatives to solve problems
Identify resources	Identify resources to solve problems within the community
Test assumptions	Test assumptions as they pertain to traditional police response in dealing with community problems
Adjusting learning processes	Adjusting learning processes to respond to different community problems

Use many external aids	Use many external aids to solve problems within the community
Provide environment of practical experimentation	Experiment with different approaches to solve community problems
Give examples from personal experience	Use personal experience to solve problems
Assess learning by asking open-ended questions	Assess problem solving by open discussion with citizens
Problem solving activities	Problem solving central to community policing
Hands on activities	Hands on activities working with the community
Spontaneity and creativity	Encouragement of innovation and creative problem solving. Encourage creativity and risk taking

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Note: Community oriented policing traits drawn from a synthesis of the literature: Couper & Lobitz (1991); Oliver (1998); Palmiotto (2000); Thurman & McGarrell (1997). Problem Solver Learning Strategy traits drawn from Conti and Kolody (1995 & 1997).

This study found there were no statistically significant learning strategy differences in usage among police officers working in community oriented policing compared traditional patrol. However, when checking the observed group placement of this sample compared with the national norm data which has been established, participants in this study were more often placed into the Problem Solver learning strategy when compared to the national norm data for ATLAS. In the current study, there were 40 placed in the problem solver group and only 25.4 would be expected based on the national norm data.

It is suggested that police officers especially community oriented police officers prescribe to the Problem Solver learning strategy. Therefore, it may be beneficial for police executives and trainers to identify learning strategy usage among veteran and neophyte police officers so that more appropriate learning accommodations can be made in the police-training environment.

If learning strategies among police officers can be identified with the ATLAS instrument, it would assuredly place police executives and trainers in an advantageous position when implementing the changes required under the axiom of community oriented policing. This may actually assist in facilitating organizational change. Law enforcement executives wishing to change from a traditional model of policing must overcome many hurdles. Much of the community oriented policing literature has focused on the external (service to the community) change. While this change is important, re-assessing organizational goals and then re-engineering the organization so that community policing can be accomplished also become very important goals. Knowledge of learning strategies within the police organization may assist in this organizational re-engineering.

#### Learning Strategies and Police Training

One of the conclusions drawn from this study is that the Problem Solver learning strategy is very similar to

those skills required under community policing. This study further found that several variables were not useful when examined singly for determining learning strategies that police officers use. However, when these variables are examined with the multivariate process of discriminate analysis, there were some statistically significant variables that help explain learning strategy group placement.

Long ago, in 1899, Mark Twain asserted that a man can seldom - very, very, seldom - fight a winning fight against his training: the odds are too heavy. This is analogous to the current study. If police are trained in a very paramilitary and behavioral environment, it will be difficult to nurture any specific learning strategy, particularly the Problem Solver strategy. Police organizations should begin to move away from the behavioral and paramilitary training environment.

The introduction of new ideas presents one of the most significant challenges to an organization. Peak and Glensor (1996) asserted that inherent in the natural resistance to change experienced by many people is the difficulty that they face when new learning is required.

A police trainer will often need to assess the knowledge and skills of trainees to ensure that the curriculum meets their needs. It is equally important to assess the strategies that police officers use to learn new subjects and skills. If a police trainer has learning

strategy information, it will be advantageous when teaching many police subjects especially those associated with community policing. For example, when working on a community problem, it would be beneficial to have viewpoints from persons operating from the Problem Solver learning strategy. This is highly desirable because Problem Solvers use all the strategies in the area of critical thinking, generate alternatives, test assumptions and identify many resources. These traits are parallel to effective problem solving.

Just as a needs assessment provides vital information about police officers, so too will learning strategies. Learning strategy data can provide insight into how police officers go about learning and solving problems, the dilemmas and obstacles they face when solving problems, and quite possibly how they go about their daily work.

If police organizations are serious about evolving into a community oriented policing philosophy then it might benefit police commanders and trainers to identify learning strategies of police officers. This study found a strong parallel between the Problem Solver learning strategy and the skills desired of police officers in community oriented policing. With this information, it would make sense that those police officers who identify their learning strategy as Problem Solvers, may in general be better suited for community oriented policing duties. This is primarily based on the parallels between the community oriented policing



tasks and traits found in the Problem Solver learning strategy.

## Recommendations

### Recommendations for Practice

1. Police departments might do well to move out of the paramilitary and behavioral (highly teacher-centered) model of training. This study revealed that learning strategies (particularly traits from the Problem Solver strategy) parallel the skills desired in community policing. However, the current training methods of police departments may inhibit these skills. Research conducted by McCoy (2000) revealed that law enforcement instructors tend to have a teacher-centered teaching style and that police training tends to be high stress and militaristic.
2. It behooves police departments to teach and foster the skills which are characteristic of the Problem Solver learning strategy if they want to develop community oriented policing officers (see table 5.1).
3. Police executives should identify dominate learning strategies used in their organizations. This will assist in organizational learning and change.
4. Police executives and trainers alike should identify learning strategies of neophyte police officers. This information can be beneficial when teaching a wide variety of police subjects. Current studies on police

training have totally ignored what processes and strategies police officers use to learn. Most of the literature examines the effectiveness of the police training curriculum and what subjects are and are not needed.

5. Police trainers should receive instruction on learning strategies. With this information it is anticipated that their teaching will be more conducive to meeting the needs of all police officers entering into the training classroom. The ATLAS instrument has a vast amount of potential in determining not only learning strategies but will also place police executives and trainers in a position to make generalizations about how to approach organizational change issues and learning. These approaches should be tailored toward the predominant learning strategies within the organization.
6. Police personnel specialists should seriously consider making the ATLAS a standard test given during the police officer selection process. This information would be placed in a permanent personnel file and examined by trainers when the officer is involved in training and other assignments. Most law enforcement agencies use a myriad of other selection profile tests including the Minnesota Multiphasic Personality Inventory (MMPI), the Wonderlick Intelligence profile, California Psychological Inventory (CPI) and the Myers-Briggs Type Indicator. Laws governing the selection of personnel maintain that

standardized tests be job related. Hogan and Guigley (1986) asserted that standardized tests must be shown to be a bona-fide business necessity or a bona-fide occupational requirement. Surely having knowledge of the learning strategies used by police officers may assist in the training of police officers. Gleaning additional information about the applicant's psyche would assuredly assist police executives and trainers in making a more informed selection. This is especially relevant to the type of officer desired in community oriented policing. Furthermore, this information most definitely appears to be job related based on the challenges the police face in today's community setting.

7. Police training must become an environment where trainees engage in dialogue and critical discussions of case decisions made in the field. Learning strategies and adult education principles should be brought into the training environment. Andragogical principles advocate more self-directed learning, bringing life experiences into the training, and establishing a climate of mutual respect and trust among trainees. One of the assumptions of andragogy is that life experiences often motivate adults to learn. Brookfield (1986) related that effective learning takes place when the facilitator encourages critical thinking and the questioning of values and beliefs (p. 10).

## Recommendations for Further Research

1. In addition to quantitative analysis of this group it would be beneficial to gather and assess qualitative data. For example, it may be beneficial to hold focus groups with participants. These data may assist the police profession in understanding more fully what impact the police culture (paramilitary and authoritarian) may have on learning strategies from the participants themselves.
2. A larger random sample from several police departments across the nation might help in developing a sounder empirical rationale and a representative sample that can be generalized to the population. Furthermore, data from a larger sample will assist in developing a theoretical underpinning of learning strategies used by police officers. Data such as these are sorely needed to more fully understand the effects of police culture on learning and organizational change.
3. It would be beneficial to examine the relationship between learning strategies and personality variables of individual police officers. For example, if the researcher could have access to the Myers-Briggs Indicator data along with the ATLAS profile data, relevant generalizations could then be made about the types of individuals attracted to policing and learning strategies as it relates to personality type. Hence, the

personality type of the police officer may influence learning strategy orientation.

4. It would be beneficial to investigate learning strategies used by police personnel in management and command positions. The current study only investigated learning strategies used by line level police officers. With additional information on learning strategies used by police commanders it may then be possible to begin to foster a fuller understanding into the area of learning strategies in police organizations. These data will further assist in developing a theoretical rationale.
5. It is recommended that other researchers use multivariate analysis techniques (discriminate analysis) as used in this study. Learning is a very complex process. Thus, single variable analysis explains very little about the complex process of learning. The data from this study were not significant when examining the variables of age, gender, education, job assignment and race individually. However, when a discriminant analysis was calculated, three variables were beneficial (age, gender and job) in explaining the group placement process and a discriminant function could be named.

#### Final Commentary

The problems inherent to community oriented policing which police organizations must address are likely to be such that police departments throughout the United States

are starting at the same point in possessing a number of obstacles. These obstacles include outdated police training methods and haphazard methods to foster organizational and individual learning. Factors such as these may be critical to any ultimate solution to community policing's problems.

This study represents a baseline evaluation into the learning strategies used by Wichita, Kansas Police Officers. No other studies have investigated learning strategies used by police officers. Although this study was a descriptive design and limited to 80 police officers, the findings are encouraging in-as-much as the study raises salient questions on the current police training culture.

This study provides direction for other police and adult education researchers by establishing a baseline for future researchers interested in collecting learning strategy data on police officers. Furthermore, this research sheds light on aggregate community policing and learning strategies research. This is refreshing because research has tended to focus on evaluations of police academy curriculum which are hegemonic in the literature. This study has deviated from this tradition and provided useful information for researchers and practitioners alike in describing learning strategies preferences of police officers. More studies such as the current one are sorely needed to more fully understand police culture, learning and the change process.

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APPENDIXES



APPENDIX A

COVER LETTERS



## SEDGWICK COUNTY, KANSAS

### SHERIFF'S DEPARTMENT

COUNTY COURTHOUSE • 525 N. MAIN • WICHITA, KANSAS 67203 • TELEPHONE 383-7264 • FAX 383-7758

July 21, 1999

Mike Watson  
Chief of Police  
Wichita Police Department  
455 N. Main  
Wichita, Kansas 67203

Dear Chief Watson:

I am currently a lieutenant with the sheriff's department. I am in the process of initiating my doctoral dissertation research at Oklahoma State University. I am interested in investigating learning strategies utilized by police officers in the field. Of corollary interest are differences in learning strategies utilized by police officers assigned to community policing duties and police officers assigned to traditional patrol duties.

The purpose of this letter is twofold, (1) to express to you that I have an interest in utilizing the Wichita Police Department for my data; and (2) to request approval from you to utilize the police department for the study. Your department has a very impressive commitment to community oriented policing strategies throughout the rank and file.

If you approve this request, I would like to utilize a random sample of 30 officers assigned to patrol duties and 30 officers assigned solely to community policing duties. These officers will be both male and female. The total research sample will be 60 police officers. The research would entail the police officers completing a brief demographic survey and they would be administered an instrument "Assessing the Learning Strategies of Adults" (ATLAS). The ATLAS instrument and the demographic survey can be completed rapidly by participants, normally between three and four minutes to complete both. Myself or a research assistant will personally go to the substations and administer the ATLAS for the convenience of the officers. It may be decided at a later time to utilize a mail out. If this is the case, the participant officers will be mailed the survey (instrument) to complete and they would return said instrument in a self addressed and stamped envelope.

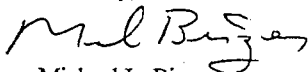
<http://www.southwind.net/sheriff/>

Over the past several years I have collaborated and consulted with Deputy Chief Steve Cole and Captain Tom Stoltz on a diversity of community policing issues. They have been invaluable resources and have given me an enormous amount of insight into developing our community policing strategies at the sheriff's department. Captain Stoltz related to me if you approve this research that he will assist me with the various information that I may require during the study.

I will not begin collecting data until probably late August or September. It is anticipated that this research will shed light on the area of learning strategy usage among police officers. At the present time, knowledge pertaining to learning strategies among police populations is sorely lacking. If empirical data can identify distinct patterns of learning strategies among police populations, it will provide insight into how police officers conceptualize and learn new tasks outside of the formal academy or academic setting. This may be advantageous in-so-much that it could provide practitioners with insight into predominate learning strategies utilized by police officers. These data may assist trainers and executives when teaching and fostering the changes required under the community policing philosophy.

There is no area of this study that will shed a negative light on the Wichita Police Department. In fact, it will give the police department some publicity in the literature given light of the fact that I intend to publish the results of study in the future. Your consideration in this matter will be appreciated. Thank you.

Sincerely,



Michael L. Birzer  
Sheriff's Lieutenant  
383-7315

APPENDEX B

DEMOGRAPHIC QUESTIONNAIRE AND ATLAS INSTRUMENT

## DEMOGRAPHIC QUESTIONNAIRE

Note: Your participation in this study is strictly *voluntarily*. Your refusal to participate, or your participation will not be used against you in any manner relating to your current employment status. You are further ensured of strict *anonymity* and all data results will be reported in the aggregate form. Thank you for your cooperation.

1. What is your current job assignment?

(Check One) Patrol [  ] Community Policing [  ]

2. How many years have you been a police officer? \_\_\_\_\_

3. What is your current educational status? (Please check one)

High-school Diploma or Equivalency [  ]

Associate Degree [  ]

Bachelor's Degree [  ]

Master's Degree [  ]

Doctorate Degree [  ]

4. What is your gender? Male [  ] Female [  ]

5. What is your race? (Please check one)

African American [  ] Asian/Pacific Islander [  ] Hispanic [  ] White/Non Hispanic [  ]

Other [  ]

6. What is your age? \_\_\_\_\_

7. What is your learning strategy as indicated on the ATLAS Instrument?

(Please check your identified learning strategy)

*Problem Solver Subgroup One* \_\_\_\_\_

*Problem Solver Subgroup Two* \_\_\_\_\_

*Navigator Subgroup One* \_\_\_\_\_

*Navigator Subgroup Two* \_\_\_\_\_

*Engager Subgroup One* \_\_\_\_\_

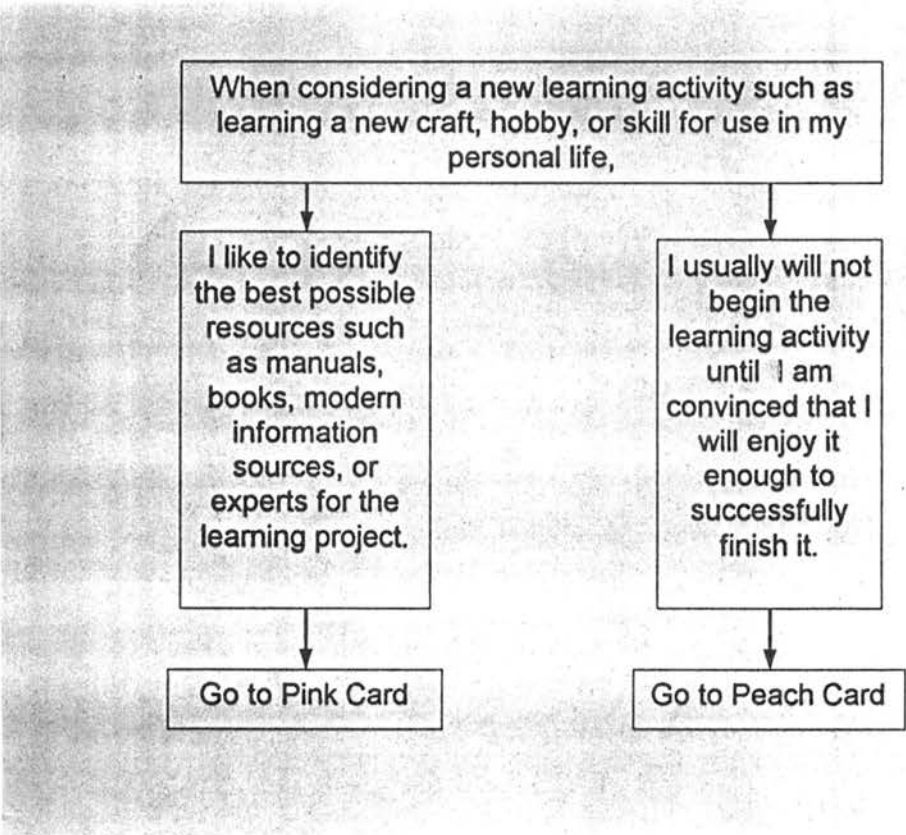
*Engager Subgroup Two* \_\_\_\_\_

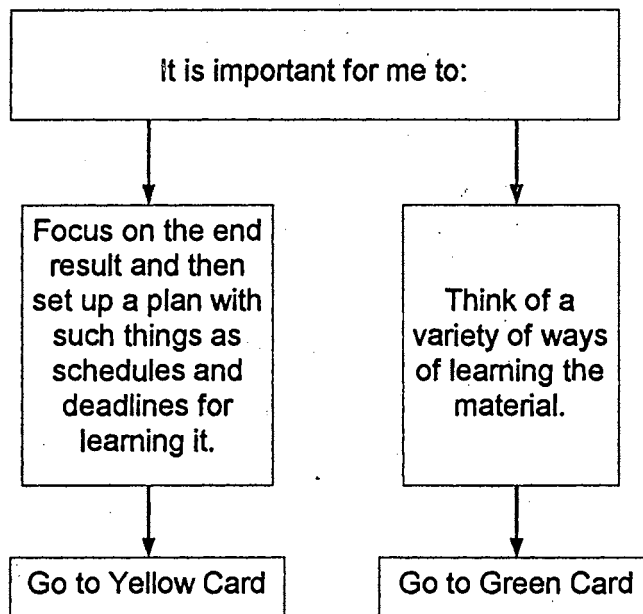
# ATLAS

(Assessing The Learning Strategies of Adults)

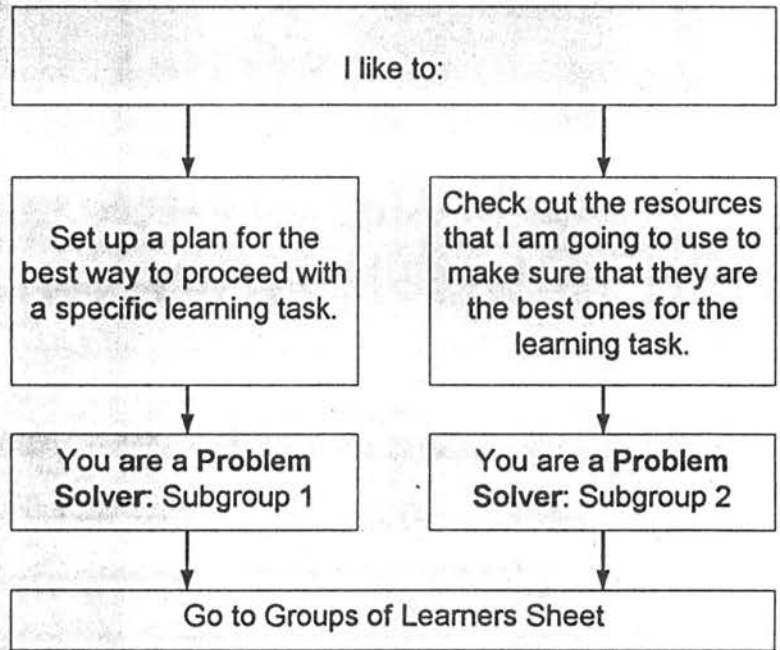
**Directions:** The following cards have questions on them related to learning in real-life situations in which you control the learning situation. These are situations that are **not** in a formal school. For each one, select the answer that best fits you, and follow the arrows to the next colored card that you should use. Continue this process until you come to the Groups of Learners sheet. Along the way, you will learn the group in which you belong. Start with the **BLUE** card.

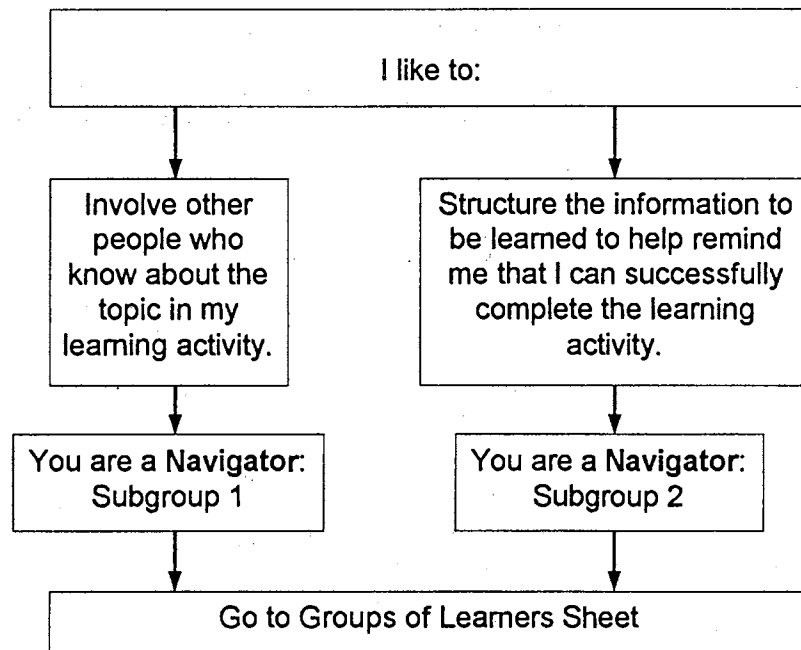


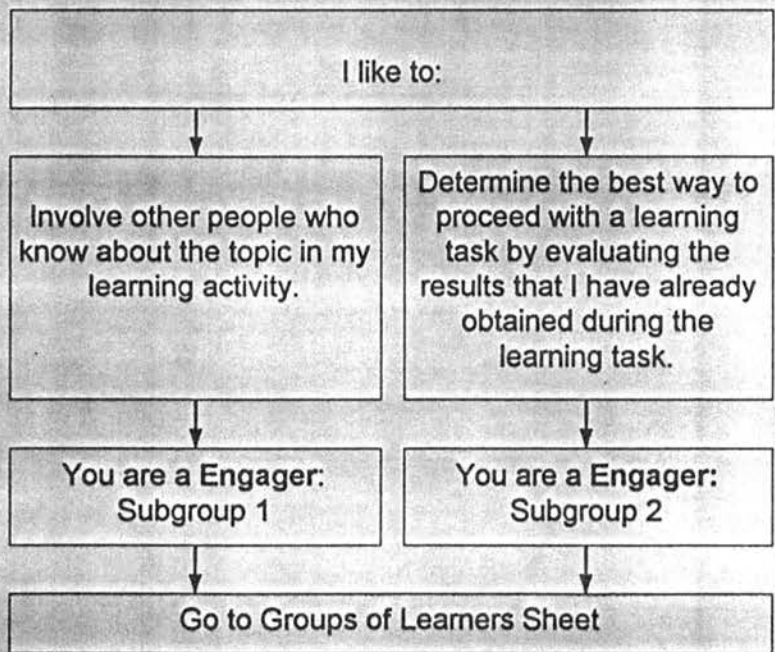












APPENDIX C

INSTITUTIONAL REVIEW BOARD (IRB)

APPROVAL FORM

OKLAHOMA STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD

Date: November 15, 1999 IRB #: ED-00-169  
Proposal Title: "LEARNING STRATEGIES UTILIZED BY POLICE OFFICERS"  
Principal Investigator(s): Robert Nolan  
Michael Birzer  
Reviewed and Processed as: Exempt  
Approval Status Recommended by Reviewer(s): Approved

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Signature:



\_\_\_\_\_  
Carol Olson, Director of University Research Compliance

\_\_\_\_\_  
November 15, 1999

Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

CITY OF WICHITA



POLICE DEPARTMENT  
OFFICE OF THE CHIEF OF POLICE  
CITY HALL — FOURTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202

November 8, 1999

Institutional Review Board  
Oklahoma State University  
Stillwater, Oklahoma

Dear Board Members,

This is to inform you that I have personally spoken to Michael L. Birzer regarding research that he is interested in conducting utilizing police officers employed by the City of Wichita. Specifically, Mr. Birzer has expressed an interest in studying learning strategies utilized by police officers. I have granted approval for Mr. Birzer to utilize officers employed by the Wichita Police Department for his study.

Sincerely,

A handwritten signature in black ink, appearing to read "William M. Watson".

William M. Watson  
Chief of Police

WMW:tsm

VITA

Michael Lee Birzer

Doctor of Education

Thesis: LEARNING STRATEGIES UTILIZED BY POLICE OFFICERS

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born on May 27, 1960 in Wichita, Kansas, the son of Leo L. and Lou E. Birzer.

Education: Graduated from Wichita North High School, Wichita, Kansas May of 1979; received Bachelor of Science degree in the Administration of Justice from The Wichita State University, Wichita, Kansas in August 1989; received Master of Administration of Justice degree from Wichita State University, Wichita, Kansas in August 1994. Completed requirements for the Doctor of Education Degree at Oklahoma State University in July of 2000.

Professional Experience: Assistant Professor, Department of Human Resources, Criminal Justice Program, East Central University, Ada, Oklahoma (1999-present). Sedgwick County Sheriff's Department, Wichita, Kansas (1981-1999), highest rank obtained, Sheriff's Lieutenant.

Professional Memberships: Academy of Criminal Justice Sciences (ACJS).