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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

CHANGE AND LEARNING AMONG OKLAHOMA DEPARTMENT OF CORRECTIONS STAFF

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF PHILOSPHY

By
Mary L. Livers
Norman, Oklahoma
2001

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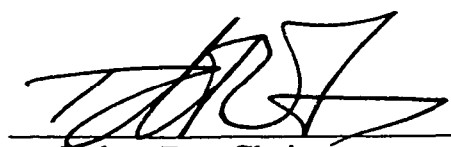
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CHANGE AND LEARNING AMONG OKLAHOMA
DEPARTMENT OF CORRECTIONS STAFF

A Dissertation APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL LEADERSHIP
AND POLICY STUDIES

BY



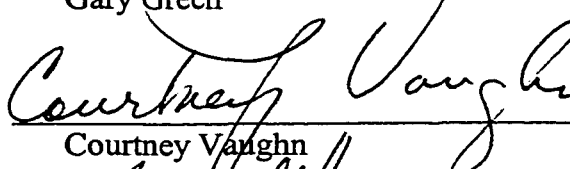
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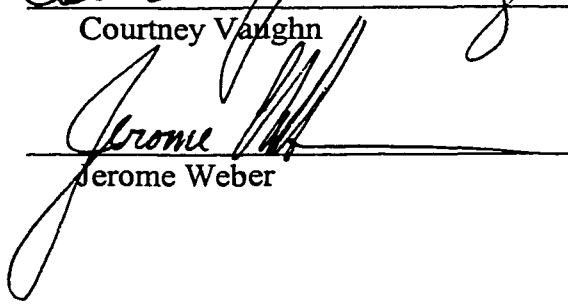
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Abstract

Although change and learning studies have been done to connect theoretical models of innovation diffusion and change theory, most have been limited to qualitative data. A survey based on the theories of learning and change was distributed to professionals who work in the Oklahoma Department of Corrections in order to evaluate the understanding of how learning is related to change and innovations. The study presented explanations of how and why changes were made by professionals in the Oklahoma Department of Corrections. It focused on the nature of the relationship among images of change as described by the respondents, the types of changes made, and the use of resources in the learning process. Of the 398 employees who were defined as "professional" staff, 180 useable responses were received. Responses indicated that a variety of resources were used in the learning process and that the role of the supervisor in implementing change is very important. It was also determined that the large change can best be predicted when work environment factors combine with the support of community and friends. Regulations were negatively associated with both large and complex change.

CHAPTER I

Overview of Study

"The reasonable man adapts himself to the world: the unreasonable one persists in trying to adapt the world to himself. Therefore all progress depends on the unreasonable man." Bernard Shaw

Introduction

Rapid growth in business usually means rapid change in the work environment. It usually means that organizations and the professional staff that make up those organizations make adaptations and incorporate innovations in their daily practices that lead to better service and improved efficacy. Such is not the case in the field of corrections, where rapid growth in inmate populations has occurred throughout the United States over the last ten years. Rapid growth has meant rapid expansion in the incarceration of both male and female offenders in federal, state, and private prison organizations. Rapid "change" in how correctional institutions operate and fulfill their statutory missions has not, however, been realized.

The very nature of the correctional organization, particularly the prison environment itself, is resistant to change (Hawkins, 1976). The correctional organization, whether it be a federal, state or a private concern, should be considered in the context of a bureaucracy. Bureaucratization relates to changes within the organization toward greater rationality and improved efficiency (Eitzen, 1974). Organizational efficiency is maximized when there is a chain of command; when all decisions are made on the basis of technical knowledge, and discipline is impartially enforced (Eitzen, 1974). Irwin and Austin (1996) observe that there is a new management style in corrections that requires a

more centralized approach and takes away the traditional authority and discretion enjoyed previously by prison administrators. Lines of authority as well as procedures are formalized in written policy and are often found in elaborate manuals (Irwin & Austin, 1996). Stern (1998) further indicates that people who work in prisons belong to a hierarchy and are out of necessity rule-bound. Stern (1998, p. 194) indicates "that routines, systems, ways of dealing with prisoners, what is allowed and what is not, when and how and where are all set out in regulations, standing orders, decrees, and instruments. Whatever is set down in the rules is presumably authorized and sanctioned by the legitimate authority." The organizational structure that exists in prisons not only creates a culture in which the inmates must learn how to survive, but it also creates a working environment and a culture for the correctional staff who are employed there.

The working environment and culture of each prison setting is unique and can vary a great deal from location to location depending on whether it is a federal, state, or local detention facility. Each site may also vary according to the size, complexity, or specific mission of the facility (Williamson, 1990). Prisons are categorized in several ways but most commonly are referred to by their security classification. Williamson (1990) defined maximum security facilities as highly regimented with wide arrays of security hardware. He further stated they are "imposing and of movie and television fame"(Williamson, 1990, p. 36). The Oklahoma Department of Corrections defines maximum security facilities as highly structured with inmates being locked in their cells for twenty-three hours a day. Perimeters are protected by two barriers (fences or walls) and are guarded by armed towers, electronic cameras and, motion sensors, and by mobile armed patrols. Inmates are permitted to move within the facility only when they are

escorted by a correctional officer(s). Medium security facilities are also highly structured but allow some free movement by inmates at certain scheduled times and are locked in cells only during "counts" or between 10:00 p.m. and 5:30 a.m. These facilities have a minimum of two fences, are protected by an armed tower officer, and an armed mobile patrol. Minimum security facilities are generally "open" with one or no fence where movement of inmates is not as structured. The perimeter of the minimum security unit is not considered "secure" and therefore is not protected by armed patrols (ODOCa, 1999). It can be seen then that the mission of the institution impacts the physical structure and the operational policies of the prison, thus affecting the staff work environment and the institutional culture as well. According to Williamson (1990) the institutional environment can have a negative impact on correctional employees. The perceived loss of control and a feeling of helplessness can have both long and short term effects on the institutional staff as well as the inmate population.

What then is it like to be a professional working in the prison setting? It has been said that staff are also "doing time" along with the prisoners, except it is in eight hour increments instead 24 hour tours of duty. Gresham Syke's classic study is dedicated "to the man in prison—both prisoner and his guard"(Sykes, 1958). The environment itself is confining and controlled, not only by the physical restraints of doors, observation towers, and fences, but also by strict regimentation, scheduling, and a highly organized system of rules and regulations. These elements contained within the prison environment seem to be in conflict with many of the attributes of being a "professional."

One such concept generally associated with the definition of "professionalism" is that of autonomy, which obviously would be greatly restricted in the correctional setting

described above. Individual practitioners in corrections do not, for the most part, control their own time or working conditions (Williamson, 1990). The majority of corrections professionals are controlled by the bureaucratic environment of prisons, and by the rules and procedures guided by the courts and legislatures. The higher one goes in the organizational structure of corrections, the greater the autonomy that is granted. Corrections professionals such as physicians or psychologists never reach the degree of autonomy the individual practitioner in private practice might reach (Williamson, 1990). The degree of autonomy that is enjoyed in the work environment is just one way in which "professions" are differentiated from non-professions.

Efforts at a clear concept and a definition of a "profession" have had a long and controversial history (Cervero, 1988). There appears to be no agreed upon way to determine professions from occupations. At least one researcher (Schein, 1972) believes the ultimate criterion of professionalization is the achievement of "autonomy." This autonomy means that the professional knows what is best for the client because of extensive and specialized education, subjecting one's decisions to be scrutinized only by colleagues, and setting one's own standards and entry into the profession by peer reviews. Many scholars suggest that the concept of professionalism cannot be defined by any single criterion. Different sociologists have assigned different weights to the various criteria, but all have agreed on the necessity to use multiple criterion such as the following:

1. The professional is engaged in a full time occupation that is the major source of income for the individual.

2. The professional is considered to have a strong motivation or a calling to their field and is assumed to have a stable lifetime commitment to that career.
3. The professional possesses a specialized body of knowledge and skills that are achieved during a prolonged period of education and training.
4. The professional makes decisions on behalf of the client using general principles and theories that are applied to a particular situation.
5. The professional is assumed to be service oriented and acting in the best interest of the client.
6. The professional is assumed to be objective in providing service to the client.
7. The professional demands autonomy of judgment of his own performance.
8. Professionals form professional associations that develop admission criteria, educational standards, licensing requirements, and areas of jurisdiction.
9. Professionals are acknowledged for their specific area of expertise but are limited in scope to their area of expertise.
10. Professionals are not generally allowed to advertise or to seek out clients. (Schein, 1996, p. 8-9).

As can be surmised from reviewing the various criteria, the "traditional" professions of law, medicine, and ministry fit most of the criteria noted. The various criteria fit other professions in differing degrees however. Other professions commonly found to be employed in the correctional institutional environment meeting the criteria in

varying degrees are: teaching, social work, psychology, and management. Professionals who work within the field of corrections must adjust their view of delivering their professional services. Professionals in the field of corrections work for large organizations in contrast to being self-employed. They generally report for work according to an exact schedule determined by the needs of the institution, rather than being self-determined. Professionals are subjected to a clear and precise chain of command that weakens colleague authority (Schein, 1996). Despite possible impediments to providing professional services within the confines of the prison setting, the services of doctors, nurses, psychologists, social workers, accountants, attorneys, teachers, managers, and ministers are vital to the well-being of inmates, to the maintenance of a healthy and safe institutional culture, and to fulfilling the mandates of federal courts.

Inherent in professionalism is the maintenance of professional competence through continuous learning and, ultimately, the adoption of changes in practice or the adaptation of innovation. Change and learning are paramount to the success of not only the individual professional, but also to the greater organization as well. According to Marquardt (1996, p. xv) organizations must "learn faster and adapt to rapid change in the environment or they will not survive". The changes referred to include the intrinsic way the organization conducts its business: its values, mindset, and its primary mission. Corrections organizations are subject to the direction of public opinion and, thus, with some degree of modicum, must respond in practice with shifts in public opinion. Failure to accordingly make significant changes may result in discontent from the taxpaying public that supports the government function of the prison and, ultimately, expulsion of

members of the organization that have not made necessary adaptations in philosophy or practice. According to Senge (1994) organizational growth is dependent upon the learning and professional growth of its members. Senge (1994, p.236) asserts that organizations "...learn only through individuals who learn. Individual learning does not guarantee organizational learning, but without it, no organizational learning occurs". Each person's commitment and ability to learn, therefore, is essential not only from an individual standpoint but also from the standpoint of contributing to a learning organization, which is vitally important in today's climate of rapid social and political change. There is a growing interest in the area of organizational change as evidenced by the increasing number of organizations that employ directors of change management or consultants concerned with change assessment and management (Buckley et al., 1998).

Two theoretical models of learning are useful in constructing the study. They are the Diffusion of Innovation theory (Rogers, 1983) and Change and Learning Theory (Fox, Mazmaniam, & Putnam, 1989.) Diffusion of Innovation theory describes and explains adoptions of innovation by a group of individuals within the context of a social system. While the diffusion of innovation theory offers a sociological perspective, the change theory describes and explains the process of change from the individual perspective.

Rogers (1983, p.5) defines diffusion as "...the process by which an innovation is communicated through certain channels over time among the members of the social system." His studies found that people tended to adopt innovations at different rates. Rogers classified people either as innovators, early adopters, early majority adopters, late majority adopters, or laggards (Rogers & Shoemaker, 1971).

The other theoretical model useful in the study is Change and Learning theory. There are significant contributions in the research concerning change and learning in the professions of medicine, law, and architecture. Change has been recognized as fundamental to the purposes and practices of continuing professional education. Most research has been concerned with trying to establish a cause and effect, linear relationship between professional performance and an educational intervention. The attempts to define this relationship has been inconclusive and inconsistent (Davis et al., 1992; Lloyd & Abrahamson, 1979; Sibley et al., 1982).

Recent theory has created an emerging paradigm in which learning is viewed as continuous within the context of individual change. The first extensive study was The Physician Change Study commissioned by the Society of Medical College Directors of Continuing Medical Education (Fox et al., 1989). The theory resulting from the physicians study generally describes the relationships among three factors in the change and learning process. First, the forces for change are thought of as the reason or motivation for change. These forces may include personal, professional, and social forces. Most changes, it was noted, occur for reasons that are a combination of forces, rather than the result of single factors. Secondly, the study found that dimensions of learning were not always connected to learning, although physicians tended to mention personal or professional reasons in connection to learning and change. They also mentioned curiosity, professionalism, and a sense of personal well-being among reasons to learn. The third element in the change and learning process identified by the researchers was the type of change that physicians reported. Changes are categorized as accommodations, adjustments, or redirections. Accommodations are considered to be

very small changes that require very little effort to accomplish. Adjustments are a bit more complicated, requiring more time and effort to achieve. Redirections represent major changes that are generally more complex and affect many different aspects of the professional's life. Redirection is considered to take much longer to achieve typically.

A follow-up to the physicians study was conducted with architects (Price & Knowles, 1995). The researchers found overall similarities with the findings of the physicians study. Utilizing the same qualitative research methods, it was found that the architects made many changes in their practices and, in most cases, they engaged in learning activities to facilitate those changes. The researchers concluded based on their findings, that the natural learning model proposed by Fox et al. might be applicable to a broader spectrum of professionals.

Studies providing support of the model also include a study of the events which trigger change and learning among gerontologists (Harvey & Fox, 1994). Another study was done concerning the adoption of innovations among radiologists (Fox & Costie, 1996). These studies have much to offer professionals in the fields of medicine and architecture as it relates to continuous learning and attempts to make meaningful changes in professional practices. But what about change and learning processes that are equally important to professionals who work in the field of corrections? How do professionals in the correctional environment, particularly the closed environment of the prison, pursue innovations and incorporate them into their professional practices?

The Problem

Professionals that work in the field of corrections have the same ethical responsibilities continuously to learn and adopt innovations to provide the best possible

services to their client, whether the client is considered the inmate in custody, the staff member in the chain of command or, in the more global sense, the taxpayer who supports the prison system. Little is known about how corrections professionals identify what changes they believe are needed to be made in their practices. If changes in professional practices have occurred, little is known as to what factors led to those changes and if learning played an important role in making those changes. Corrections officials charged with the responsibility of administering a constitutional corrections system have a practical need for applicable knowledge of what and how professionals learn, and how that learning contributes to changes in practices and the operations of the corrections system.

Research Questions

The study answers the following research questions:

1. What changes did the professional practioner in corrections adopt over the last two years?
2. What forces caused these changes in practice or procedures?
3. What resources were used in making the changes?
4. Do professionals in corrections utilize resources differently?
5. Does the work environment affect change and learning of corrections professionals?
6. Does the length of service and gender affect change and learning of the corrections professional?
7. Can one predict the extent of change according to the differences in forces and images of change?

8. Can one predict the extent of change based on the kinds of resources used to learn and change?

Hypotheses

Several hypotheses were tested to assist in answering the research questions. The hypotheses are as follows:

1. Resources are utilized differently by different types of corrections professionals;
2. The security level of the institution and support from supervisors and co-workers is associated with the change and learning of corrections professionals;
3. Length of service and gender is associated with the learning strategies and types of resources used by corrections professionals;
4. The extent of change is associated with the forces and images of change; and
5. The extent of change is associated with the kinds of resources used to make changes.

Purpose of the Study

The purpose of this study is to determine what changes corrections professionals in the Oklahoma Department of Corrections have made in the last two years and if learning was a factor in making those changes. The study also seeks to explain how learning resources and characteristics of the corrections professional may affect change and learning.

Rationale for the Study

The study provides both practical and theoretical benefits. The findings in this study contribute to the body of literature concerning theory and practice of continuing professional education, particularly in the field of corrections where such research is nearly non-existent. Findings also assist continuing professional education planners in corrections to redirect training activities based on a different rationale for the types and frequency which training activities are offered. The study also contributes to the growing body of knowledge in Fox and Davis' Change and Learning theory.

Definition of Terms

Change: "...a difference from what was-an alteration in feeling, thought, or action." (Fox et al., 1989, p. 1)

Continuous learning: For the purposes of the study, continuous learning refers to a larger concept of activities that are intentional and directed toward acquiring specific knowledge or skills.

Continuing professional education: Includes all efforts to provide learning for active professionals beyond initial education and entry into the field.

Corrections administrator: For the purposes of the study, correctional administrator refers to any position of administrative or managerial responsibility where a four year college degree is required.

Corrections institution: For purposes of the study, corrections institution refers to a major facility that is headed by a warden who maintains custody of adult felons sentenced by a court to serve incarceration time.

Corrections professionals: For purposes of the study, corrections professionals refers to persons occupying positions which require a four year college degree or advanced degrees in the performance of their duties.

Limitations of the Study

The population of participants is from a variety of disciplines. Included in the definition of corrections professionals stated above are differing numbers of teachers, doctors, nurses, accountants, pharmacists, psychologists, psychiatrists, school principles, human resource administrators, planners, researchers, computer experts, and trainers. Also included in the population of professionals are correctional managers such as wardens, deputy directors, regional directors, and others whose job requires college degrees and administrative competence. The findings are not "pure" in the sense of getting a perspective of a particular professional field. Overall, it is felt the findings are useful aggregate information in looking at the learning activities of all professional staff within the context of the prison environment.

CHAPTER TWO

Review of the Related Literature

To understand the significance of this study, it was necessary to examine four major areas of literature that provide a frame of reference for the research problem. First, adult learning and development theory was examined. Secondly, concepts that are related to continuing professional education (CPE) were reviewed. Third, diffusion of innovations and change theory was explored. And, lastly, the study of change and learning by physicians was presented.

According to Gall (1996) researchers frame explanations of observed phenomena as theories. Kerlinger (1973) defined a theory as a "set of interrelated constructs, definitions and propositions that present a systematic view of phenomena by specifying relations among variables". Research takes one of two forms: that which tests a theory, or that which discovers the nature of a phenomenon and may form a theory. This chapter presents a divergent review of literature, which contributes to understanding the theoretical basis for the study.

Adult Learning Theory

Continuing Professional Education practice has been greatly influenced by research and theories derived from adult learning theory. In order to understand the various learning models actively used in CPE, it is necessary to examine the foundations established in the adult education concepts upon which CPE are built.

Early researchers who developed models of adult learning theory identified characteristics of adult learners (Cross, 1981; Houle, 1961; Knowles, 1980). Houle

(1961) in *The Inquiring Mind* conducted work relating adult characteristics to learning motivation. Results indicated that adult learners could be placed in one of three categories: goal-oriented, activity-oriented, or learning-oriented. Other researchers attempted to explain adult learner's motivation in a more comprehensive way. Cross (1981) described adult learning as an interactive process, which commences with the individual's self-evaluation and is largely determined by the learner's set of attitudes about education in general. Knowles (1970, 1982) puts forth probably the best known description of adult learners in his set of assumptions called andragogy. His work indicates that as individuals mature, their self-concept progresses toward being more self-directed, their life experience becomes a resource of learning, their readiness to learn is oriented toward developmental tasks and social development, and they want the learning to be applicable immediately. Tough (1971, 1982) further developed the concept of self-directed learning, as it related to learning projects by adult learners. According to Tough (1978), a typical person engages in five learning projects per year and the most common motivation for learning is the anticipation of using the skill or knowledge. Tough (1978) also reports that about 20 % of all learning projects are planned by someone who is paid or are institutionally designated to facilitate the participant. In the other 80 % of reported learning projects, the individual learner plans the activities.

Long (1989) further explains self-directed adult learning as a multi-faceted concept addressing the learner's autonomy, the learner's relationship to the application of instructional techniques, and the learner's sense of responsibility to be one's own change agent. As more research was conducted in the area of adult learning throughout the 1980's, more and more attention was being given to research within an individual's life

experiences relating to professional performance. One of the areas explored by researchers was the learners' motivation for participation in adult learning activities. Aslanian and Brickell (1982) support the work of Knowles, in that adults appear to become ready to learn as they develop and grow as adults. They found that more than half of adults' life transitions are related to work, as is more than half of adult learning. The second most reported reason adults learn, as indicated by Aslanian and Brickell's research is determined by family situations. Research also has indicated that another motivation for adult learning is some change in the individual's consciousness (Brookfield, 1986; Mezirow, 1981). It is likely that adult learners are motivated to participate in learning activities by a combination of many of these broad factors. The evolution of research focused on the motivation to learn and its connectiveness to work gave rise to a growing area of research in continuing professional education.

Continuing Professional Education

Continuing professional education is relatively new in the field of education. It was extremely visionary of Houle (1980) to first bring attention to the area of professional development in American education. In his book, *Continued Learning in the Professions,* Houle argued that professions were in a state of crisis and that a new paradigm of continuing professional education was the best way to address the problems facing them. Houle was concerned over what he believed was the apparent perceived decline in professional competence, the concern of whether professions could adequately regulate themselves, and the perception of the "elite" taking advantage of those who needed or desired professional services. Houle (1980) believed that thoughtful redirection of learning; not just traditional continuing education activities could positively

impact the needed level of reforms. He described three modes of learning among professionals: inquiry, instruction, and performance. Houle's modes of learning could be considered generally descriptive in nature. While they contribute to the general understanding of adult learning as it relates to the professions, they do not address the relationship that exists between learning and change in the workplace.

Cervero (1980) articulated another more philosophical approach to understanding the nature of CPE. Cervero believed that educators and society viewed the professions from a functional, conflict, or critical viewpoint. The functionalist viewpoint is based upon a belief that professionals "possess a high degree of specialized expertise to solve well defined problems" (p. 22). The conflict viewpoint maintains that professions create a need for services then control access by the public to those services. This viewpoint suggests that changes in professions must derive from the social-structural level, as opposed to an individual level. The third viewpoint is the critical viewpoint, which concedes the need for particular knowledge while at the same time recognizes that knowledge cannot be used in a value-neutral way.

While Houle and Cervero approached the subject of continuing professional education from a more sociological construct, other researchers focused on the individual's perspective of participation in professional educational activities. One such researcher was Knox. Knox's (1980) proficiency theory described a series of factors related to life situations and the individual that affects decisions to participate in adult learning activities. According to Knox, either in the personal or the professional aspect of an adult's life, the purpose of participating in adult learning activities is to reach a desired level of proficiency.

In his book, *The Reflective Practitioner,* Schon (1983) observed that professionals must often make decisions that fall outside a particular zone of mastery. In these cases the decision is most likely influenced by the professional's own values and experiences. Schon postulated that the learner becomes aware of a need for learning when there is a discrepancy in the process of "knowing- in-action." Knowing-in-action is the automatic, deep knowledge and skill that makes up the routine or practice of the professional. When a surprise or something out of the ordinary occurs in practice, the individual is caused to reflect on previous actions in a process of "reflection-in-action." This reflection may lead the learner to a new behavior which will be added to the individual's loss of skill or knowledge.

Attitudes about learning and education have also been found to have an impact on learning. Cross (1981) described learning as an interactive process, beginning with the learners' assessment of themselves and their sets of attitudes regarding education. Cross also found other factors to affect an individual's motivation to participate in continuing professional education. The importance of educational goals, the likelihood of anticipated success, and the individual's life circumstances to include opportunities and barriers to learning all contribute to the individual's decision to participate.

Fox et al. (1989) proposed a theory of learning and change that describes an interactive process among forces of change, the process of learning, and changes that subsequently occur. Forces of change are professional, social or personal forces that drive or compel learning to occur. Professional forces include the desire to increase competence or the pressure exerted in the clinical environment to learn. Personal forces such as personal well being are mixed sometimes with professional goals, or less

frequently, operate as the main motivating force. Social factors for example, collegial relationships act alone or in concert with professional forces to motivate change. Learning, therefore, varies according to the image of the change and the knowledge and skills necessary to make the change (Davis & Fox, 1994).

Nowlen (1988) described the individual's continuous learning and function as the result of two separate but intertwined strands of influence. These are the cultural strand (which carries cultural meaning, expectations, and norms) and the individual strand (which carries the individual's past experience, growth, and cultural interactions). It is the continuous interaction of these two strands that helps explain performance according to Nowlen (Davis & Fox, 1994). Nowlen (1988) also formulated operational models of continuing professional education. They include the update model, the competence model, and the performance model. The most dominant model is the update model, which assumes the purpose of continuing professional education is to maintain competence by keeping up with up-to-date knowledge. The competence model not only addresses the need to obtain new knowledge and skills, but also takes into account the professional's motivation and interpersonal skills. The performance model takes into account the culture of the organization in which the professional practices.

Even though continuing professional education is considered a vital arena for professional growth and learning, there is not and will likely never be enough continuing professional education opportunities to address all of the learning needs of the population of working professionals. Each of the aforementioned scholars has presented somewhat differing perspectives of CPE. These theorists share the view that the individual learner is self-regulating, capable and active in setting goals for him/herself, working toward those

goals, and benefiting from their achievement. They also share the view that the individual and the interaction with his/her environment are unique and contribute to the individual's learning processes (Davis & Fox, 1994). As more research is conducted in this important venue of learning and education, the body of knowledge known as continuing professional education will continue to evolve and answer more questions relating to the professional as learner. What is clearly evident throughout the existing research is that continuing professional education is centrally concerned with change and the learner.

Theories of Change

The research of continuing professional education in the 1980s gave rise to an emerging area of study: the study of professional change in practice. Change can be thought of as a difference between the present and the past or the future. One of the questions that has been asked on a frequent basis in continuing education is "Does CPE lead to change?" Traditional research methods, including experimental or quasi-experimental studies, have attempted to analyze the efficacy of continuing professional education. Studies concerning continuing medical education, for instance, have varied from the view continuing medical education makes no difference (Sibley et al., 1982) to that of it does make a difference under certain circumstances (Stein, 1990). Davis and Fox (1994) found that when the principles of education are applied in a systematic way in the design and construction of CME, the tool for change is effective (p. 23). Davis (1992) conducted a "convenience sample" of randomized trials involving physician learning. In the 50 studies examined, the dependent variables were changes in physician performance or health care outcomes. Davis found that the majority of physicians demonstrated

changes in at least one major area, such as counseling patients, health promotion, preventative medicine, resource utilization, and general management of patient medical conditions. There were also demonstrated improvements in at least one outcome measure of patient health care. These studies are relatively consistent in that well-designed CME interventions, when consideration is given to the learning environment (practice site) and the physician as an individual learner, can effect changes in physician performance.

Diffusion of Innovation

The growing body of research in continuing professional education emerging in the late 1970's and early 1980's gave rise to additional questions related to change in the learner. As "change" in the learner became a focus there were attempts by researchers to delve deeper into the nature of change. One such attempt to explain change in the learner resulted in the diffusion of innovation theory developed by Rogers (1983). Diffusion of innovation studies examined patterns, rates, and characteristics of incorporation of innovations into a large group. Rogers (1983) defined diffusion as the process by which an innovation is communicated through a group of people in a social network over a period of time. One might categorize Rogers' work as sociological in perspective. He identifies four main elements present in diffusion of innovation research: (1) an innovation, (2) communication networks, (3) time, and (4) a social system.

The characteristics of an innovation determine the rate at which it may be adopted. Five attributes important to an innovation and its adoption are (1) relative advantage, (2) compatibility, (3) complexity, (4) trialability, and (5) observability. Communication networks are critical to the diffusion of an innovation, since most individuals evaluate the new idea based on subjective evaluations of peers rather than on

objective information. Valente (1995) demonstrated through his research that while mass media may make an individual aware of an innovation, it is the degree of exposure to one's peer network that predicts adoption of an innovation.

Time is also an important factor in the adoption of an innovation. Rogers (1983, 1985) identified five different steps in the decision-making process on whether to adopt an innovation: (1) knowledge, (2) persuasion, (3) decision, (4) implementation, and (5) confirmation.

Rogers (1983, 1985) classifies members of a social system on the basis of innovativeness into five adopter categories: (1) innovators, (2) early adapters, (3) early majority, (4) late majority, and (5) laggards. The final element in diffusion research is the social system that an innovation may be introduced. The social and communication network in a system may facilitate or impede the acceptance of an innovation throughout the system (Rogers, 1983, 1985).

The literature about adoption of innovations has shown that the process of change is an interactive process, as opposed to a clear linear one. Other scholars have written of the critical importance of communication across a social system or network. Bennis, Benne, & Chin (1985) support the concept that successful innovations are propagated across informal social learning networks in which opinion leaders can influence or discourage a change. The authors observe that change was either easy or difficult depending on the context in which it was made and the physician's perceptions of the reasons for changing (Fox et al., 1989).

Another factor to consider in the adoption of changes or innovations is significant emotional events which may "trigger" a response to a given situation. These changes are

more often associated with larger, more complex changes and are frequently connected to personal motivations, such as to satisfy curiosity, to enhance well-being, or to advance in one's social position or career. (Fox et al., 1989). Geertsma (1982) suggests that even when forces of change are in place, a triggering event like as a personal crisis of illness or depression, may be required before change is implemented. Fox et al. (1989) found that professionalism, with its fusion of personal identity and social role, might act as an additional self-propelling reason for change. The authors also found that changes physicians made were often the result of a triggering event, and were more vigorous, complex, and "happy" when they were perceived as intrinsic rather that coerced by an extrinsic entity.

Another growing body of research is evolving based on the earlier theoretical framework of diffusion of innovation theory. This body of research in change and learning is specifically interested in how learning relates to change in the individual learner.

Change and Learning Studies

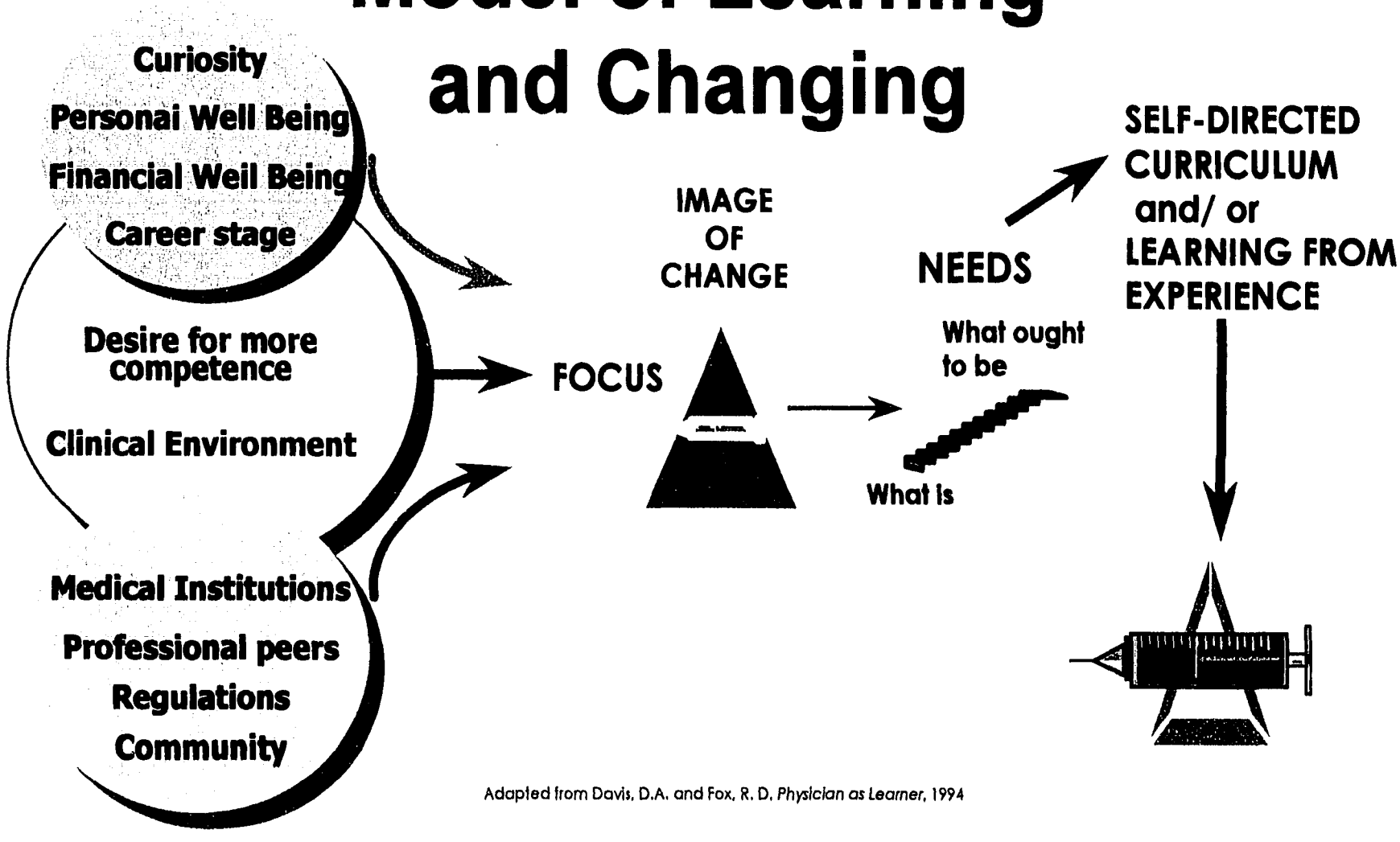
The first significant study of change and learning was the Physician's Change Study by Fox, Mazmanian, and Putnam (1989). Fox, et al. (1989, p. 7) identified three elements to include in an explanatory model: (1) People do not change arbitrarily. There are reasons why people change and these reasons are classified as "forces;" (2) Changes are not automatically accomplished and must be acquired by obtaining new knowledge or skills; and, (3) Categories of change can be identified ranging from minor to all-encompassing. They found that the changes the physicians made involved some degree of learning, which varied according to the types and motivation for each. From the data,

Fox, et al. (1989) developed four categories of changes: accommodations, adjustments, redirections, and transformations.

Accommodations were described as simple changes with very little learning involved, usually made because of some external force, and associated with some negative acceptance of the change. Adjustments were small to moderate in size and involve some degree of intentional effort to accomplish. Redirections were categorized as large or major element changes that were associated with a positive emotion when completed. Transformations were described as large, complex, life altering changes where learning was greatly involved. Strong positive emotions usually were reported with this kind of change.

Fox et al. (1989) also found five distinct forces of change ranging from purely external to purely internal. These forces were categorized as social/regulatory, social/professional, professional, professional/personal, and personal. Fox, et al. (1989) found that these forces influenced both the nature of a change and the related learning activities. The nature of relationship between motivation, learning, and change is illustrated in Figure 1: Relationships between motivating forces, learning, and changes.

Model of Learning and Changing



Adapted from Davis, D.A. and Fox, R. D. *Physician as Learner*, 1994

Fox et al. (1989) developed a model of change and learning among physicians based on the findings in the Physicians' Change Study. According to this model, physicians are continuously scanning information about their practice and reflecting upon their own internal needs and goals. Physicians then consider a change and develop an image of that change. They then engage in a process of self-assessment and whether they will pursue that change in influence by the clarity of their image of change and the quality of their self-assessment.

Physicians who choose to continue in a change process most likely will be involved with learning activities to assist them in achieving their goals. Fox et al. (1989) identified three general reasons physicians engaged in making changes in their practice. They first attempt to gain a basic understanding of the change being considered in order to assess the need for the change or additional knowledge. Next, they may seek to achieve competence in the area of the contemplated change. Lastly, they may require additional learning for application in practice. The physician may at any stage discontinue the change and return to the status quo. They may also seek out other resources such as journals, professional colleagues, or less often, formal continuing education programs.

Studies that provide support for the basic tenets of this model include a study of change and learning among architects (Gruenwald, 1995). Gruenwald (1995) found that architects did not alter their approach to marketing arbitrarily; that changes in marketing strategies were mainly motivated by professional forces, particularly economic forces; and that changes varied depending on the magnitude of those forces. Price (1997) also studied patterns of change and learning in the practices of architects. He found four

general types of changes described by architects as similar to those discovered by Fox et al. (1989) in their study of physicians. Price (1997) found that the greatest number of changes among architects is associated with professional forces in combination with personal forces. The finding is also supported by the earlier work of Gruenwald (1995).

The design of both architect studies by Gruenwald (1995) and Price (1997) closely paralleled the studies by Fox et al. (1989). The studies are based on the naturalistic method of inquiry and relied primarily on retrospective data obtained by structured interviews. Another naturalistic study was also conducted in the area of geriatrics that supports the basic tenets of Fox's change and learning model. Harvey and Fox (1994) found that half of the changes made by health professionals in geriatrics were incremental in nature, consisting of adjustments in some element of their practice. The other half were structural, complex, and major in nature. Multiple forces were also identified in each change, with professional forces being the strongest stated force for change. Learning also accompanied each change, although the type of change process varied.

While earlier research efforts in change and learning have primarily been conducted using naturalistic research methods, there are at least two studies that have quantified responses to questions related to change and learning among professional groups. Fox et al. (1997) conducted a study of Canadian radiologists and the changes made in radiological practices.

A survey based on theories of change and learning was distributed to Canadian radiologists in order to evaluate how learning is related to innovations in radiological practices. The results of the study suggests the following based on previous research in

change and learning: (1) adoption of an innovation is a common change; (2) perceptions of change affect the way in which changes in practices occur; (3) learning resources are utilized differently in three stages: the assessing the need stage, the stage for building competencies, and the implementation stage; (4) patterns of learning in a self-directed curriculum vary according to the type and the reason for a change (Fox et al. 1997).

Another descriptive study in change and learning was conducted surveying dentists in Georgia. Hinely (1998) found that dentists surveyed made changes in attitudes, business operations, clinical operations, and in human resource management. The most commonly stated motivation for change among dentists was the desire to improve competency (Hinely, 1998). "Trigger" events were reported to be the reason for initiated changes in 55.6% of the respondents (Hinely, 1998, p. 142). This descriptive study furthered the research previously done by Fox et al. (1989).

Fox and Bennett (1998) suggested that three aspects of learning should be considered in facilitating change and learning in practice. The first and most basic component is the self-directed curriculum designed by each learner to incorporate new knowledge and make use of his or her unique experience. The second component identified by Fox and Bennett (1998) is based on learning in groups. According to the researchers, group learning serves as a source of interaction and helps to develop the image of the desired change. The third component is learning within learning organizations. Learning organizations provide opportunities for professionals to learn how to adapt standards. Fox and Bennett (1998) suggest that the three systems should be integrated in order to facilitate change and learning in professional practice.

Learner motivation is also an important aspect of the effectiveness of learning, as it relates to change. Fox and Miner (1999) suggested that learners base their decisions to engage in educational programs or self-directed learning activities on their perception of need. The authors suggest that discrepancy analysis is a useful method to translate specific performance problems into training events that address the gap between the current state and the desired level of performance. The authors also suggest that path-goal theory explains how and why a learner may choose a specific learning activity that will lead to attainment of some goal.

While there has been substantive research with regard to change and learning as it relates to a variety of professional groups (i.e., physicians, dentists, radiologists, and architects), a study has not been conducted addressing change and learning among the specific population of corrections professionals working within prisons. This group is unique in that they are professionals working within a very closed and structured environment, which by its very nature represents a large bureaucratic organization that is largely resistant to change and innovation. The study examines how learning is related to innovations in correctional practice and explains how and why changes are made in correctional practices. Correctional literature relating to change and learning is reviewed in the following section of this chapter.

Change and Learning among Correctional Staff

Corrections is a field which borrows heavily from other professional disciplines and the review of literature indeed reflects this view. To review corrections-based research, one must peruse a variety of databases covering a multitude of topic areas; to include psychology, psychiatry, sociology, medicine, education, and criminal justice.

This is not unlike the experience of Mactavish who conducted research in the area of correctional leadership. She observed that "...research in correctional management and leadership is either part of the private-sector literature with a smaller population included or that management is discussed in the context of penology as the practices relate to inmates"(Mactavish, 1993, p. 37). The same is true in finding research in the area of correctional staff learning, education, and development.

A contributing factor in the lack of scholarly work in the area of corrections per se, is the fact that very few undergraduate degree programs in the United States offer a curriculum of study of corrections. Even fewer advanced degree programs offerings are available in corrections curriculums around the country. In 1998, there were only five programs (3.01%) noted out of 166 criminal justice or criminology programs containing a curriculum in corrections for an advanced degree (Crepeau, R., 1988). Out of the 166 criminal justice and criminology advanced programs listed, only 25, or 15.01%, mentioned corrections related topics as areas of faculty research. Professionals who choose a career in corrections often obtain a degree in a social science discipline that qualifies them for an entry or advanced career position in a correctional agency. The Oklahoma Department of Corrections, for instance, requires a bachelor's degree from an accredited college or university without substitution of experience for certain positions, such as the probation and parole officer. Specifically required is a degree which includes "at least 24 semester hours in any combination of psychology, sociology, social work, criminology, education, criminal justice administration, penology, or police science (Oklahoma State Statute: 57 O.S. 1991, Section 515). If more such degree programs did exist in corrections, perhaps it would give rise to a growing body of research in

corrections and distinguish the field as, indeed, a true profession as opposed to a "discipline" within the larger professional arena of criminal justice. That is not however the case and, as such, there does not appear to be a body of research that is considered solely "corrections." There is, in fact, not an abundance of scholarly literature that exists with "corrections" or "correctional" in the titles. A scan of educational and social science journal databases revealed fewer than ten articles concerning correctional staff development. The author could find none that specifically addressed correctional staff learning.

The research that does exists tends to fall into one of three categories. Research exists that deals with prisoners' treatment programs for criminal behaviors (Andrews et al., 1990; Antonowiez & Ross 1994; Cullen & Applegate, 1998; Langworthy & Latessa, 1996; Madden, 1996). Another source of academic articles in corrections literature addresses training and development of staff (Archambeault & Archambeault, 1982; DeLong, 1980; Gilbert, 1989; Johnson, 1993; Horne & Passmore, 1977; McCollum, 1996; Morrison, 1976; Wolford & Kowalski, 1993). Most of the referenced articles are descriptions of training programs or discussions of the need for staff training in corrections. Exceptions include a demonstration study of changing correctional officers (Katsampes, 1975), and a study of correctional librarianship (McClaskey, 1977). Literature can also be found in the area of correctional education. It should be noted that the literature that addresses the area of inmate education typically deals with the "teaching" of inmates in correctional facilities (Belzer, 1990; Cocoran, 1984; Dell'Apa, 1973; Fox, 1987; Hurska, 1981; Kiser, 1987). One article was found concerning the competencies of the correctional educator (Griffin, 1981). Other articles concerning

education in corrections addressed the effectiveness of prison education programs (Linden & Perry, 1982), evaluation research in basic skills with incarcerated adults (Meyer, 1983), and factors relating to inmate participation in educational programs (Parsons, 1990). Noticeably absent in the research are articles that addressing the learning and adaptation of change among correctional staff.

While the literature presented in this chapter has been useful in guiding the study, no theory to date has offered an explanation of change and learning among corrections professionals. Fox et al. (1989) has offered a very comprehensive theory of change and learning within the context of the professional culture of medicine. Gruenwald (1995) and Price (1997) provided a segue between architecture and medicine and change and learning. Hinely (1998) studied change and learning among dentists. But no research has been done to address how and why corrections professionals seek and accomplish change in practices. It is for these reasons that this study was pursued. It is felt that this study contributes to adult learning theory and continuing education models as it relates to corrections professionals. It also has the potential to have a direct impact in the area of corrections training and education.

CHAPTER THREE

Methodology

Overview

The conceptual framework for the study arose out of the research by Fox et al. (1989). Ten factors were found which motivated change among physicians. Out of these ten factors, four categories of change were formed based on the complexity and magnitude of the reported changes. Fox, Mazmanian, and Putnam (1989) also postulated 25 hypotheses about the relationships between categories of change, the learning involved, and motivational factors that were identified. No identified study has focused on corrections professionals as it relates to change and learning.

The intent of the study was to determine the types of change that may have been made by corrections professionals, why such a change was made, and how a change in practice was put into place. Discovering how a change was made are accomplished by asking questions related to motivating factors, events that may have triggered a change, and learning resources and activities that may have been utilized in making a change. The following research questions were used to guide the collection of data and the subsequent data analysis that was conducted:

1. What changes did the professional practitioner in corrections adopt over the last two years?
2. What forces caused the change in practice or procedure?
3. What resources were used in making changes?
4. Do professionals in corrections utilize resources differently?

5. Does the work environment affect change and learning of corrections professionals?
6. Does the length of service and gender affect change and learning of the corrections professional?
7. Can one predict the extent of change according to the differences in forces and images of change?
8. Can one predict the extent of change based on the kinds of resources used to learn and change?

Hypotheses

The following research hypotheses were tested in the study:

Hypothesis 1: Resources are utilized differently by different types of corrections professionals.

Hypothesis 2: The security level of the institution and support from supervisors and co-workers is associated with the change and learning of the corrections professional.

Hypothesis 3: Length of service and gender is associated with the learning strategies and types of resources used by corrections professionals.

Hypothesis 4: The extent of change is associated with the forces and images of change.

Hypothesis 5: The extent of change is associated with the kinds of resources used to make changes.

The Design of the Study

The study is based on data from a mail out survey that was sent to corrections professionals who work for the Oklahoma Department of Corrections. The survey enabled the researcher to gather data from a relatively large and geographically dispersed population. The closed-ended questions enabled the researcher to quantify the responses and facilitate statistical analysis (Dillman, 1978).

Survey Methodology

Surveys that include face-to-face interviews mail questionnaires, and telephone surveys are the most frequently used methods in educational research (Dillman, 1978; Merriam & Simpson, 1989). Ary, Jacobs, and Razavieh (1990) found that administering a questionnaire allows the researcher to include a larger number of subjects and allows for more participation from diverse locations. They also report that a questionnaire is more confidential and may illicit "more truthful responses than would be obtained with a personal interview" (Ary et al., 1990, p. 421). Since this researcher would be generally known through her position in the agency to most, if not all, potential respondents, confidentiality was an important aspect in the research design.

Survey questions are classified by Merriam and Simpson (1989) as open-ended and closed-ended. Open-ended questions give respondents the latitude to answer as they deem appropriate. Closed- ended questions provide the respondent with forced choices between given alternatives. Open-ended questions are more difficult for the researcher to analyze statistically, but provide for an opportunity to collect more detailed information.

Closed-ended questions are appropriate for well defined issues and for when the researcher knows what direction or flow of thought he wants to pursue through the

respondent's replies (Dillman, 1978). The Likert scale response is an example of the closed-ended question with an ordered response.

Partially closed-ended questions were also defined by Dillman (1978) as essentially the same as unordered response questions. The major difference between this and the unordered response question is that it allows the participant to make additional choices other than what have been provided by the researcher. A high number of such additions would indicate that more evaluation would need to be done before attempting to draw conclusions from survey responses.

The ordered response, mail out survey was determined to best meet the research objectives of the study. The study seeks to answer specific research questions with well-defined issues. The survey method was utilized to enable confidentiality of participants, accommodate a large number of respondents in diverse locations, and provide data to conduct statistical analysis.

Population

The population for the study was professional level staff of the Oklahoma Department of Corrections. Professional level staff hold positions whose job requires a college degree or higher level of education with no substitution with experience and/or a licensing requirement, which in practice, can only be obtained in conjunction with a college degree. According to Oklahoma Department of Corrections data there are 389 such job positions in the agency (ODOCa, 1999; ODOCb, 1999). Included in this category of job titles are the positions of warden, deputy director, regional director, director, general counsel, assistant general counsel, physician, dentist, pharmacist, optometrist, physician assistant, psychiatrist, psychologist, psychological assistant,

psychological assistant supervisor, registered nurse, correctional teacher, senior correctional teacher, and school principal (ODOCc, 1999). Even though probation and parole officers are required to have a college degree, this job class was excluded due to the degree of autonomy that is afforded in their job duties. Probation and parole officers are not confined within the strict structure of the institutional setting and, therefore, are not under the same physical constraints of staff who work inside the prison environment.

The Oklahoma Department of Corrections is the second largest agency of state government of Oklahoma. The organization was created by legislative authority in 1969, although, the state ran a correctional institution as early as 1908. The agency currently incarcerated over 21,865 inmates in public and private correctional facilities across the state. The agency headquarters is located in Oklahoma City with two regional institutional offices and a division of community corrections and probation and parole. The agency employed 4,979 full time employees in 37 state run facilities, as well as seven districts of probation and parole. The annual budget for the agency is $398,250,335 in state appropriated dollars (ODOCd, 1999). The population of subjects defined earlier is part of the organization of the agency.

Development of the Instrument

An instrument that addressed the lifelong learning strategies of correctional staff or the issues related to change and learning among correctional staff did not exist, so an instrument based on research related to other professionals was adapted to this purpose. The survey was patterned after Rankin and Fox's (1997) Canadian Association of Radiologists Survey (Appendix A). Rankin and Fox's survey was developed to determine the factors that help or hinder the adoption of new practices by Canadian radiologists.

The research used an anonymous mail survey to obtain information about how and why radiology professionals adopted an innovation. The survey consisted of a section on demographic information and the identification of the respondent's innovations or changes made in the last two years. Other items covered in the survey were the respondents' images of change, motivations for change, the forces of change, and the respondents' learning strategies.

Part 1 of the *Oklahoma Corrections Staff Survey* contains demographic questions. These include questions regarding gender, race, education level attained, years of correctional experience, level of correctional facility they work, and area of correctional practice.

Part 2 of the questionnaire begins with a definition of change for the respondent to consider as the questions are answered. Questions 1-7 are directly from the Rankin and Fox (1997) survey. Question 1 asks an open-ended question of the respondent to identify and write a brief description of the most important change in practice during the last two years. Question 2 of the study relates to the motivations for change. Question 3 of the survey asks the respondent to use a Likert scale rating of 1 to 5 (1=very little, 5=very much) to indicate the motivating factors for adapting their change. Question 4 asks the respondent to rate their identified change with regard to how large they perceive the change to be. It is based on a Likert scale of 1 to 5 (1=small; 5=very large). Question 5 asks the respondent to use a Likert scale rating of 1 to 5 to measure how they view the change with regard to it's complexity (1=simple; 5=complex). Question 6 relates to the respondents' relative image of change. It asks the respondent to indicate on a Likert scale rating of 1 to 5 (1=not clear; 5=very clear) to what extent the change that they made was

clear when they began. Question 7 addresses the strategies for learning as it relates to change and asks the respondent to answer how they used various learning resources in planning, making or considering a change. It also uses a Likert scale rating of 0 to 4 (0=did not use; 4=used very much).

Question 8 was not taken from the Rankin and Fox (1997) survey. This question contains 5 parts and asks the respondent to rate their agreement with statements on a Likert scale of 1 to 5 (1=strongly agree; 5=strongly disagree). The statements are designed to measure the respondents' perception of the support for change and learning among correctional staff.

The survey contained a total of 37 respondent queries and is divided into two sections: background information and survey questions. It is primarily a closed form design, permitting only a certain number of choices, which is appropriate for quantitative studies (Gall, et al., 1996). A copy of the survey instrument can be found in the appendix identified as "Appendix B-Oklahoma Corrections Staff Survey."

Reliability and Validity

The questionnaire was developed in a format that modeled after Fox's Canadian Association of Radiologists Survey (1997). The survey was based on the results of interviews conducted in the study of process and change learning (Rankin & Fox, 1995). Construct validity of the instrument was established by utilizing the same basic format and questions that related to theory of change and learning developed by Fox et al. in the radiologist survey. The instrument has face validity as the questions were modified to "fit" the subject matter pertaining to the corrections professional as opposed to the medical practitioner. Information related to the type of innovation adopted in practice in

the last year, the image of the innovation, the resources used to learn about the innovation and the reasons for making change were asked of the respondents. Questions on the Canadian Radiologists survey were modified from a medical perspective to the perspective of the corrections professional in the Oklahoma Department of Corrections. Like the Fox survey, respondents were asked to identify a change they had made. The initial question sets the stage for subsequent questions that refer to characteristics and related variables of that change.

Reliability of the instrument was tested using Cronbach's alpha test. Cronbach's alpha specifically measures the consistency of test items measuring a construct. It was used to measure the continuous data found in the Likert type items. Its intended use is not for the open-ended parts of questions. Since the survey used for this project measured several dimensions (e.g., work environment, forces of change, etc.), a Cronbach's alpha was calculated for each set of items.

The first set of items on the test that measure a construct, forces of change, had an alpha of 0.877. A Cronbach's alpha was also determined for the items measuring the extent of change and was 0.909. For the motivation for change, the alpha was 0.880. Resources used in implementing change fell into three categories: material, human, and training resources. The Cronbach's alpha for each respectively was 0.880, 0.867, and 0.854. Finally, work environment items had an alpha of 0.834.

Each of these coefficients of reliability is considered medium to high. A Cronbach's alpha ranges from 0.00 to 1.00. Therefore, these results indicate a high degree of reliability of the survey items.

Statistical Procedure

Independent Variables

The independent variables for this study were categories of corrections professionals, work environment, characteristics of corrections professionals and forces and images of change. The following explains their usage in the study.

Categories of Corrections Professionals

Categories of corrections professionals are the attributes that define the nature of the respondents' work assignment. The categories addressed are administrative/management (includes all supervisory positions); and professional/direct service (includes those who provide direct service to the inmate population such as nurses, teachers, dentists, doctors, and psychologists).

Work Environment.

Work environment includes a description of the physical work setting with regard to security level of the institution (maximum, medium, minimum, or administrative headquarters) and location of the work site (rural or urban). Work environment also includes the psychological perspective of supportiveness of co-workers and supervisors.

Characteristics of Professionals.

Length of service, gender, race, and education level represent preexisting or current characteristics that describe the relating to others, level of involvement in higher education, regulations, family and community, and work environment.

Forces and Images of Change.

The forces of change are the possible factors that lead to change. They include personal interest or curiosity, desire to improve quality of life, career stages, competence

and financial gain. Images of change are indicated by the clarity that is reported by the respondent at the time the change began. Included are rating of compatibility, relative advantage of making the change, relative financial advantage, complexity, and triability.

Dependent Variables

Dependent variables for the study are resources utilized by the corrections professional in the change and learning process, the extent of change and learning of the professional, and the forces and images of change.

Resources

Resources are classified in the survey as one of three categories: materials which include journals, video and audio tapes, and texts; human resources which include colleagues, friends, and family members; and training programs which include departmental, state, and national educational programs.

Extent of Change and Learning

Extent of change and learning is based on the learners perception of the qualities of the change as reported by the participant. The kind of the change is described as ranging from small to large, and from simple to very complex.

Data and Statistical Analysis

The following is a breakdown of the Oklahoma Corrections Staff Survey by research questions. Each paragraph addresses the research question, related variables and statistical analysis to be utilized.

Research Question 1. What changes did the professional practitioner in corrections adopt over the last two years? This is addressed by asking an open-ended question regarding the most important change they have made in performing their work

in the last two years. A content analysis technique was used to generate a coding system to identify categories to be used as a dependent variable for the study. Inter-rater reliability was determined. The data is displayed in a frequency distribution of each category.

Research Question 2. What forces cause the change in practice or procedure? General causes for change, to improve efficiency, policy change, improve effectiveness or "other" was found in survey question 2. Survey question 3 addressed more specific motivations for change and include curiosity, improve quality of life, career stages, competence, financial gain, relating to others, relating to higher education, regulations, family and community, and work environment. It also asks if there was a particular life event that may have lead to change and learning. Frequency distributions will be used to analyze data from survey questions 2 and 3. A frequency distribution will be used to analyze data.

Research Question 3. What resources were used in making changes? Survey question 7 addressed material resources, human resources, and training programs.

Research Question 4. Do professionals in corrections use resources differently? The professional's characteristics addressed were years of correctional service, security level of job assignment, type of job assignment, work location, and area of practice. The demographic information obtained from the first page of the survey with responses from survey question 7 provide the data needed.

Statistical analysis of data to answer research question 4 will be in four parts. A frequency distribution will be utilized to determine if there is an association with the independent variable years of service and the dependent variable resources. An ANOVA

will also be utilized. Correlations were also used to determine if there is an association between the job location or setting of the corrections professional and the resources utilized. The same technique will be utilized to determine if there is an association between the area of practice and the resources utilized by the professional.

Research Question 5. Does the work environment (security level of the institution and supportiveness of coworkers) affect the extent of change and learning of the corrections professional? The respondents' work assignment location was addressed in the background section of the survey. Change and learning of the respondent are addressed in survey questions 4, 5, and 6. Survey question 8 specifically addresses the supportiveness of the work environment as it relates to change and learning. Stepwise regression was used to analyze data.

Research Question 6. Do personal traits affect the extent of change and learning of the corrections professional? The background section of the questionnaire captures the years of correctional experience and gender of the respondent. Survey questions 4, 5, and 8 addressed change and learning of the respondent.

Research Question 7. Can one predict the extent of change according to the differences in forces and images of change? The extent of change is addressed in survey questions 4 and 5. The image of change is addressed in survey question 6. Stepwise multiple regression was utilized to analyze data to answer research 7.

Research Question 8. Can one predict the extent of change based on the kinds of resources used to learn and change? The extent of change was addressed in survey questions 4, 5 and 6. Resources utilized were covered in survey question 7. Stepwise regression was used to analyze data to answer research question 8.

Limitations of the Study

The study focuses on the corrections professionals in one correctional organization, the Oklahoma Department of Corrections. Therefore, generalizability to other corrections professionals is limited. The study also only looks at correctional employees in an institutional setting and therefore the findings may not be generalizable to other correctional employees in the Oklahoma Department of Corrections who work in other correctional settings such as probation and parole, support administration, and community corrections.

Since the survey was distributed by mail, the data was based only on those responses that were offered voluntarily by the recipient. Data was not obtained from those employees who may not have been interested or motivated by the subject matter of the survey. Those who didn't respond to the survey may have very different views than those that did volunteer to complete the survey.

Human Subjects Protection

The Graduate Committee gave approval of the prospectus on May 31, 2000. A copy of the Graduate Committee approval can be found in the appendix identified as "Appendix C-Change and Learning Among Oklahoma Department of Corrections Staff." The researcher applied for the authorization to complete the study from the O.U. Office of Research Administration shortly thereafter. Approval was obtained from the Office of Research Administration on July 10, 2000. A copy of the approval letter can be found in the appendix identified as "Appendix D-Letter from the University of Oklahoma's Office of Administration Approving Study."

Data Collection

The initial mailing of the survey was accomplished upon receiving approval of the graduate faculty committee and O.U. Office of Research Administration. The survey, along with a cover page, and a self-addressed envelope was mailed to each potential participant utilizing the Oklahoma Department of Correction interagency mail system. The cover page explained that responses were to be kept confidential and assured the participants of efforts to insure confidentiality. A copy of the cover page can be found in the appendix identified as "Appendix E-Research Survey Cover Page." Each employee who received a questionnaire was asked to complete the survey and mail it in the self addressed, stamped envelope to a post office box accessible only by the research assistant. Data will be destroyed by the research assistant as soon as it is determined it is no longer needed. There was no identifiable trace to an individual respondent. There were two mailings to participants, one in the middle of July, and another mailing toward the end of July 2000. Surveys were sent to a post office box in Tulsa, Oklahoma, where a research assistant gathered data and entered responses into a database. Responses were received up until the first of September 2000.

CHAPTER IV

Findings and Discussion

This chapter presents the results of a study of change and learning among professionals in the Oklahoma Department of Corrections. Eight research questions guided the study. The study examined changes made by corrections professionals in Oklahoma, the forces that caused the changes and the resources used in making changes. Work environment, as well as length of service and gender, was examined with relation to change among Oklahoma Department of Corrections professionals. The study also examined whether the extent of change could be predicted by different forces of change, images of change, or the kinds of resources used to learn and change. It was hypothesized that corrections professionals utilize resources differently; that the security level of the institution and support from supervisors and co-workers is associated size and complexity of change; and that length of service and gender is associated with learning strategies and types of resources used by correctional professionals. It was also hypothesized that the extent of change is associated with the forces and images of change; and that the extent of change is associated with the kinds of resources used to make changes.

Correlations, ANOVA's, and multiple regression analyses were used to evaluate the eight research questions and five hypotheses. Demographic data are also presented. The presentation of the data analysis was organized according to the research questions that guided the study.

Description of the Population

The Oklahoma Department of Corrections personnel department identified 389 positions that required at a minimum a four-year degree (ODOCa, 1998). The positions requiring at a minimum a four-year degree were those found in professional areas of practice in education, health care, and administration. Examples of positions include teachers, principals, nurses, psychologists, physicians, psychiatrists, dentists, pharmacists, optometrists, director, regional directors, deputy directors, wardens, deputy wardens, district supervisors, assistant district supervisors, attorneys, (ODOCa, 1998). Surveys were sent in July, 2000, to all employees who occupied such positions within the agency. A total of 180 completed and useable surveys were returned for a response rate of 43%. Table 1 presents the demographic characteristics of the respondents.

TABLE 1

Demographic Characteristics

	Frequency	Percent
Gender		
Male	59	32.8
Female	121	67.2
Race		
Caucasian	139	77.2
African American	21	11.7
Other	18	10.0
Missing	2	1.1
Education		
College Degree	75	41.7
Advanced Degree	28	15.6
Masters	35	19.4
Ph.D. or Ed.D	12	6.7
M.D., DDS, J.D.	9	5.0
Missing/Non-reportable	21	11.6

Table 1 (cont.)

Job Assignment (by locations)		
Maximum/Medium Security	73	40.6
Minimum Security	55	30.6
Community Security	19	10.6
Headquarters	15	8.3
Other (Multiple)	18	10.0
Work Setting		
Metropolitan	37	20.6
Rural	134	74.4
Other (Multiple)	9	5.0
Area of Practice		
Administrative/Management	81	45.0
Professional/Direct Service	99	55.0
	Mean	Std. Deviation
Years of Experience	11.438	7.99

Of the total sample (N=180), 62.2% were female and 32.8% were male. Seventy-seven percent of the respondents were Caucasian, 11.7% were African American, and 10% listed other. Seventy-three respondents (40.6%) reported working in high security environments such as maximum and medium security prisons. Fifty-five (30.6%) reported working in a minimum security setting, while 19 (10.6%) said they worked at the community security level, and 15 employees (8.3%) worked at headquarters. Eighteen, or 10%, reported working at multiple security levels. One hundred thirty-four (74.4%) said they work in a rural area while 37 (20.6%) said they work in a metropolitan area. Only nine (5%) reported that they work in both rural and metropolitan areas. Ninety-nine respondents (55%) were in direct service positions such as nurses, doctors or

teachers while the remaining 81 (45%) reported being in supervisory or administrative roles. The mean years of corrections experience was 11.4 years.

The responses are somewhat consistent with the population of corrections professionals in the Oklahoma Department of Corrections (excluding probation and parole officers) who are required to have degrees. It is noted that 62.2% of the respondents were female and only 32.8% were male. It is also noted that 146 positions of the total population of 389 (37.53%) who received surveys were teachers or nursing staff, which are over-represented by female staff. This is also consistent with the 55% response rate for those that work in "direct service" roles. Direct service roles include nurses and teachers, which may offer a possible explanation of the high percentage of female respondents. While the high number of female respondents in the study is consistent with the population being studied, it is not generally representative of correctional employees in the Oklahoma Department of Corrections, as it is a predominantly male work force. On January 12, 2001, there were 3071 male employees (60.07%) of the Oklahoma Department of Corrections and 1845, or 39.93%, female employees (ODOCe, 2001). With regard to race, 77.2% of the respondents are Caucasian while 79.09% of the overall population of Oklahoma Department of Corrections employees are Caucasian. African American employees represented 11.7% of the respondents, which is slightly higher than the Oklahoma Department of Corrections population of employees with 9.56 African American employees (ODOCe, 2001). "Other" races comprise 11.35% of the Department of Corrections employees, while only 10% of the respondents represented "other" races (ODOCe, 2001). The security level and locations of work assignment of the respondents are representative of the correctional workforce in Oklahoma.

Approximately 45% of the inmate population is located in a secure facility, either maximum or medium custody levels. Staffing levels are commensurate with these levels as well. Approximately 40% of the respondents reported working in a secure facility, while 40.6 reported working in minimum or low custody facilities (ODOCf, 2001).

Research Question 1

The first research question, *What changes did the professional practitioner in corrections adopt over the last two years?* was addressed by survey question 1. The responses to this question provide a starting point or direction to answer the rest of the research questions in the study. This was addressed by asking an open-ended question regarding the most important change they made in the way they performed their work in the last two years. A content analysis was used to determine a coding system to identify categories of responses. All responses were recorded and reviewed to determine if "themes" or similarities emerged from the responses. After review of the responses, six general "themes" or similarities in responses were identified. The list of responses was again reviewed and a "category" of response was then assigned. A complete listing of the responses can be found in Appendix F. The first category was changes made by the respondents due to "system changes." These include changes made as the result of being "forced" to change due to external forces such as modifications in a law or changes in practice or operational policies. An example given by one respondent was "changes due to a facility mission change...from medium security to low maximum, to include policy changes as well as physical plant changes." Forty-four, or 24.4%, of the respondents indicated this as their major change.

The second category identified was changes made because of technological innovations, such as computer automation. Examples of responses concerning technological innovation were "using the GED 200 system computer," and "utilization of the computer in teaching reading." Another response was "learning to use technology as a means to improve efficiency." Responses in this category represented major changes made by the respondent in the area of technology. Only 11 respondents (6.1%) indicated changes made in this area. The low number of responses may be due to the limited availability of computer technology in the Oklahoma Department of Corrections, which is especially true in the direct service areas such as education and medical services (ODOCg, 2000).

The third category of reported change was in supervisory practices. Examples of this category include changes supervisors reported in their management style or communication style with their subordinates. An example of one response was a change reported in "enforcing policy and in addressing personnel issues that had not previously been addressed." Sixteen respondents, or 8.9%, of change was determined to be in this category.

The fourth category identified related to changes in administrative management practices. Examples of administrative management practices are priority setting, project management, and long and short-range goal setting. Examples of responses given were "learning to set priorities better," and " ...becoming more flexible in the things I do and how I do them." Thirty-three respondents (18.3%) reported change in this category.

Another category identified was changes adopted as it related to service delivery to the client population. Examples in this category include change in teaching techniques

or change in nursing protocols. One respondent noted changes in practices as it related to "requirements in inmate health care system." The highest percentage of change (27%) was reported in this area. Of the respondents, 55% indicated working in a direct service area.

The last category identified was change resulting from being in a new or different role or job position. One example from a respondent was change as the result of a "promotion to upper management. I now have to think and act in a much broader, statewide frame of reference." Twenty-six, or 14.4%, of the respondents reported changes due to a job change.

The frequency distribution of changes made by the respondents is presented in Table 2.

TABLE 2

Frequency of Changes

	Frequency	Percent
System changes	44	24.4
Technology	11	6.1
Supervisory practices	16	8.9
Management practices	33	18.3
Service delivery	50	27.8
Job change	26	14.4
Total	180.0	100.0

Of the respondents to this question, 50 (27.85%) reported that changes they adopted were related to service delivery to the inmate population. The next most reported change made was due to a change in "the system." Forty-four (24.4%) of the respondents reported a change due to changes dictated by new policy or procedure. Thirty-three (18.3%) of the respondents adopted change in administrative management practices. Twenty-six respondents (14.4%) reported changes due to a job change. The next most frequently reported change was supervisory practice with 15 reported incidents of change (8.9%) followed by change as it related to technological innovations (11 respondents, 6.1%).

In the six categories of change identified, four of the six are characterized by being externally driven, that is some external force initiates change. Change reported in the categories of system change, technology, service delivery, and job change represent 72.7% of changes reported, indicating some force "outside" the individual initiated the majority of changes made.

Research Question 2

The second research question, *What forces caused the change in practice or procedure?* was addressed by survey items 2 and 3. This question provides a basis to answer the fourth hypothesis: the extent of change is associated with forces of change. The respondents were asked to identify general causes for change. Three choices (to improve efficiency, to adapt a policy change, and to improve effectiveness) were identified as responses to the question and a choice for "other" gave respondents an open-ended opportunity to answer the question. Forty-four (24.4%) of the respondents (n=180) reported changes in practice due to changes in policy. The same proportion of

respondents (24.4%) reported changes in practice due to a desire to improve effectiveness. Another 41 respondents (22.8%) reported that change was made for multiple reasons. A change in jobs was reported by 20 (11.1%) respondents as the reason for changes made in practice and 19 (10.6%) reported changes due to a desire to improve efficiency. Twelve or 6.7% chose not to respond to this question. Table 3 represents general causes for change as reported by the respondents.

TABLE 3

Frequency of Causes for Change

	Frequency	Percent
No Response	12	6.7
Improve efficiency	19	10.6
Policy change	44	24.4
Improve effectiveness	44	24.4
Multiple causes	41	22.8
Job change	20	11.1
Total	180.0	100.0

Of the respondents, 24.4% gave a "policy change" as the reason for adopting change, and 11.1% of respondents gave a job change as the reason to adopt change. Both reasons for change indicate a source "outside" the individual. Combined, these responses indicate 35.5% of change is again attributed to some "outside" source.

Survey item 3 also asked the respondents if there was an "event" that caused a change. Of the respondents, 52.8% (n=180) responded that an event had triggered a

change. Respondents were also asked to describe the event. Open-ended responses to this question can be found in Appendix H. A content analysis was conducted and it was determined that 60.6% of the respondents noted job related events. Examples of the responses in this category ranged from demotions to promotions, relocation to another assignment, new laws or regulation, and expectations from supervisors. Another 35.35% of the respondents indicated changes due to personal events. Among the responses in this category were major health problems, serious illness of family members, the birth of a child, divorce, and marriage engagement. Only four of the responses did not fall into one of these two major categories.

Survey question 3 asks *how much were each of the following factors a motivation for adapting your change?* A separate Likert item for identified forces of change was presented; these include curiosity, improve quality of life, career stages, competence, financial gain, relating to others, relating to higher education, regulations, family and community, and work environment. Respondents rated each item with regard to motivation for the adoption of change on a scale of 1 to 5, with 1 being "very little" and 5 being "very much." Survey question 3 asks in more detail the reasons or the "forces of change." Table 4 provides the mean scores and standard deviations for each of the forces of change.

TABLE 4

Means and Standard Deviations for Forces of Change

Force of Change	Mean	Standard Deviation
Interest	3.13	1.49
Improve Quality of Life	3.35	1.50
Career Stages	3.13	1.48
Competency	3.48	1.39
Financial Gain	2.20	1.42
Relating to Others	3.02	1.42
Higher Education	2.18	1.36
Regulations	2.22	1.29
Family and Community	2.50	1.33
Work Environment	3.83	1.17

The force of change with the highest mean score was work environment (3.83) and the lowest mean score was relating to higher education (2.18). The highest standard deviation reported was 1.50 and the lowest was 1.17; this is a limited range of variability for the forces of change items. The small standard deviation indicates less variability in responses.

The force of change with the highest mean score is work environment, which is an external factor. The lowest mean score is higher education, which is an internal factor.

Research Question 3

The third research question, *What resources were used in making changes,* was addressed by survey item 7. This question provides information related to of the fifth hypothesis: the extent of change is associated with the resources used to accomplish that

change. The survey item addressed material resources, human resources, and training programs. A separate Likert item identified for materials used was presented; these include professional journals, videotapes, audiotapes, texts, the Internet, and "other." There was a range of responses in the category of "other." Some examples of responses in the other category include "feedback from testing," as well as "spiritual readings," and "networking with contiguous states." Appendix H contains the complete list of "other" responses for material resources used. Survey item 7 asks the respondent to rate the use of various material, human and training resources on a scale of 0, meaning the respondent "did not use" the resource, to a rating of 5, meaning that they used the resource "very much." Table 5 depicts the mean scores and standard deviations for each of the materials when used by respondents in adapting change.

TABLE 5

Materials Used in Learning or Adopting Change

	N	Mean	Std. Deviation
Journals	118	2.29	0.97
Video	86	2.07	0.89
Audio	77	1.83	0.89
Texts	119	2.61	0.97
Internet	100	2.37	0.93
Other	64	3.41	0.81

The resource material with the highest mean score was "other" (3.41) and the lowest mean score was audiotapes (1.83). The highest standard deviation was 0.81 and the highest was 0.97; this is a limited range of variability for resource materials, which

indicates less variability in responses. The three resource materials with the highest mean scores (other, texts, and Internet) are materials that are likely to be the most accessible to corrections professionals. Even though the Internet or other technology may not be available to many direct service staff, it is still reported to be a great resource for those who do have access.

The second type of resource used in adapting change addressed by item 7 was human resources. A separate Likert item for human resources used by respondents was presented; these include staff in the same facility, staff located outside of the respondents' facility, staff outside the respondents' discipline, staff in the respondents' unit or office setting, friends, spouse and family members, and other. Respondents were asked to rate on a scale ranging from "0" (did not use) to "4" (used very much) how others, either in the work setting or outside the work setting, helped them in learning. Table 6 presents the mean scores and standard deviations for each of the human resources identified by respondents in assisting in learning activities.

TABLE 6

Human Resources Used in Learning or Adopting Change

	N	Mean	Std. Deviation
Staff/In facility	145	2.59	1.10
Staff/Outside facility	142	2.68	0.97
Staff/Outside Discipline	125	2.44	0.99
Staff/In Unit	144	2.69	1.03
Friends	116	2.34	1.00
Spouse/Family	98	2.36	1.04
Others	21	2.86	1.15

The human resource with the highest mean score was "other" with a mean score of 2.86. Examples of responses for "other" included supervisors and consultants. Only 21 or 11.6% of the respondents indicated using other human resource choices in making change. A complete listing of responses for "other" human resources used can be found in Appendix I. The lowest mean score reported was 2.36 (spouse and family). The highest standard deviation was 1.15 and the lowest was 0.97. Again the variability is within a limited range.

The most frequently reported human resource utilized was staff in the same unit as the respondent. One hundred forty-five (80.5%) of the respondents reported staff located at the same facility were utilized from "very little" to "very much" as a resource in making change. These findings may indicate that there is a reliance on staff within the Oklahoma Department of Corrections as a human resource used in learning or adopting change. Friends, and spouses and family (normally outside the work environment) were reported to have the least impact on facilitating learning or change. Those professionals who were the closest in physical proximity and most accessible were reported to have the most impact in assisting with change and learning.

Training programs were also identified as resources that were used by respondents. A separate Likert item for identified training options was presented; these include Oklahoma Department of Corrections training programs, training workshops (such as offered by professional associations), outside training offered by other agencies (such as hospitals, mental health or law enforcement agencies), nationally sponsored programs, and other training programs identified by the respondents. Respondents were

asked to rate the use of various training programs on a scale ranging from "0" (did not use) to "4" (used very much). The most frequently reported training program used by respondents was departmental training programs offered by the Oklahoma Department of Corrections. One hundred twenty-seven (70.5%) reported using this resource. Training offered by the Oklahoma Department of Corrections is the most available resource out of the five categories of training opportunities, and is obviously taken advantage of by respondents. Another 67.5% of the respondents reported using training offered by professional associations. One hundred six (58.8%) reported utilizing outside training by other agencies, eighty (44.4%) report using nationally sponsored training and two (1.11%) report "other" training used by the respondent. Table 7 presents the mean scores and standard deviations for each of the training resources.

TABLE 7

Training Utilized in Learning and Adopting Change

	N	Mean	Std. Deviation
Departmental Training	127	2.69	0.91
Professional Workshops	121	2.65	0.95
Outside Agency	106	2.48	1.03
National Programs	80	2.35	1.08
Other Training	2	3.50	0.71

The highest mean score reported was "other" (3.50) with a standard deviation of 0.71 (n=2). Only two respondents indicated "other" as a response. This would indicate perhaps that the availability of the training might be limited, but is considered highly effective with the two respondents as indicated by the high mean and the low standard

deviation score. While only two individuals indicated using outside training, several additional comments were included regarding outside training utilized. These additional comments can be found in Appendix J. The second highest mean score of 2.69 with a standard deviation of 0.91 (n=127) was departmental training. The lowest mean score was nationally sponsored programs (2.35). The standard deviation ranged from 0.71 to 0.91. Training offered by the department may in fact be more directed toward implementing specific change since it is more adaptable to targeted training needs of the employees within the agency. For example, changes in policies governing the management of long term inmates resulted in a series of training sessions with employees throughout the department on the new "system of incarceration" (ODOCh, 2000). Nationally sponsored training, training offered by outside agencies or professional organizations may not be perceived as useful to the Oklahoma Department of Corrections employee in adapting change as departmental programs may have more direct training objectives geared toward implementation of change. Training offered by the Oklahoma Department of Corrections is much more accessible to employees in the agency and therefore most, if not all, of the participants would have benefited from departmental training. On the other hand, training that is offered nationally, or through professional association meetings, is much less available to employees in the department. Often there is an application process involved with attending nationally sponsored training program and only one employee from a state might be accepted to a program offering (NIC, 2000). Nationally held professional association meetings are often inaccessible to a majority of staff due to the state's costs associated with state sponsored attendance. Therefore it is possible that only a limited number of survey participants may have

experienced a nationally sponsored training program or a nationally held professional association meeting.

Research Question 4

The fourth research question, *Do professionals in corrections utilize resources differently*, was addressed by survey items 7 and in Part 1, Background Information. Demographic characteristics identified were years of correctional service, security level(s) of job assignment, type of job assignment, work location, and area of practice. Item 7 identified what resources participants used. They included material resources as well as human resources, and training programs. The specific hypothesis related to this question was that resources are utilized differently by different types of corrections professionals.

To first see the relationship among the resources, correlations were performed on all items in the three categories of resources: material resources, human resources, and training resources. This was done in order to see if each of the variables should be treated discreetly or could be combined in a composite score. Items within each category were found to be more interrelated than they were related to items in the other categories. Correlations of materials used by participants in the study indicated moderate relationships within categories. Journals were found to be significantly correlated (r= 0.406; p= 0.000) with video materials, audio materials (r=0.363; p= 0.002), texts (r= 0.481; p= 0.000), the Internet (r= 0.329; p= 0.002), and "other" materials (r= 0.404; p= 0.004). Examples of items in the "other" category are literacy labs, policies, and self-help or spiritual materials. Video resources were found to be significantly correlated (r= 0.463, p= 0.000) with audio materials and texts. Texts were significantly correlated with

the Internet (r= 0.294; p= 0.005) and "other" (r= 0.347; p= 0.016). The Internet was the least likely resource material to be significantly related to other resources. This may be due to the newness of the Internet as a resource for learning, or may be due to the lack of accessibility of computer technology by staff, especially the direct service staff within the department. Many direct service staff do not have private offices, or work spaces that are inaccessible to inmates. Since inmates are not allowed access to the Internet, the physical location of staff workspaces or offices where inmates are allowed limits accessibility of the Internet to staff as well. Table 8a presents the results of the correlational analysis of materials used by participants.

TABLE 8a

Correlations of Materials Used by Participants

	Journals	Video	Audio	Texts	Internet	Other
Journals	-	0.406	0.363	0.481	0.329	0.404
Video		-	0.463	0.300	0.050	0.262
Audio			-	0.217	0.226	0.299
Texts				-	0.294	0.347
Internet					-	0.157
Other						-

TABLE 8b

Correlations of Human Resources Used by Participants

	Staff at facility	Staff out facility	Staff out disc	Staff in unit	Friends	Family	Other
Staff at facility	-	0.314	0.210	0.690	0.263	0.106	0.216
Staff out facility		-	0.486	0.220	0.323	0.177	0.430
Staff out disc			-	0.345	0.432	0.404	0.508
Staff in unit				-	0.287	0.201	0.220
Friends					-	0.516	0.523
Family						-	0.332
Other							-

TABLE 8c

Correlations of Training Resources Used by Participants

	Department	Training	Outside	National
Department	-	0.309	0.126	0.053
Training		-	0.291	0.111
Outside			-	0.483
National				-

Correlations of human resources used by participants are presented in Table 8b. Staff at the facility was significantly related (r= 0.314; p= 0.000) with staff outside the facility (r= 0.210; p= 0.023), staff outside their discipline, staff within the work unit(r= 0.690; p= 0.000), and friends (r= 0.263; p= 0.007). Staff outside the facility was significantly correlated (r= 0.486, p= 0.000) level with staff outside their discipline. Staff within the work unit was found to be significantly correlated (r= 0.287, p= 0.003) as well as friends. Staff outside the discipline was significantly related (r= 0.345; p= 0.000) with staff in the work unit, friends (r= 0.432; p= 0.000), family (r= 0.404; p= 0.000). Staff in the work unit was significantly related to friends (r= 0.287; p= 0.003). Friends were significantly related (r= 0.516; p= 0.000) with family with "other" (r= 0.523; p= 0.031). These findings indicate more relationships are seen among the staff items, which could be due to their role in the work environment as they share the same work setting. Family is not directly a part of that setting whereas friends could be found in work environment.

Table 8c presents correlations of training resources used by participants. Departmental training was significantly correlated (r= 0.309, p= 0.001) level with professional workshops. Professional workshops were significantly correlated with training offered by outside agencies (r= 0.291; p. 0.004). Training offered by entities

outside the agency was significantly correlated ($r= 0.483, p= 0.000$) with nationally sponsored training. Fewer relationships among the items are shown in this result. As discussed previously, department training meets different staff development needs than outside or national training opportunities.

Since the correlations were high among the variables within the category of material resources, it was treated as one variable. Composite scores were calculated for each category by adding the responses together. Missing observations were eliminated. Composite material scores were used as the dependent variable to identify if there was a difference due to gender, race, level of education, years of experience, work location, and type of job assignment (independent variables). The analysis resulted in one significant difference as it related the use of material resources. Of the respondents to the survey, 62% were female which is not generally representative of the corrections workforce (ODOCe, 2001). It was also found that administrative and management personnel utilize material resources more than direct service providers do ($f= 8.929$; $p= 0.003$). This may be due to accessibility of resources. Administrators and managers are likely to be responsible for a budget, have the authority to expend monies, and control purchasing decisions. Thus it is possible that administrators and managers have better access to material resources such as texts, audio and video materials, journals, and the Internet. Direct service staff on the other hand, would not have the authority to order such materials to have available for their use. No other significant differences were found for the other characteristics in the study. Appendix K contains the ANOVA for each variable related to respondent characteristics. The summary table of the analysis of variance for each variable as it relates to the use of material resources is presented in Table 9.

TABLE 9

Use of Material Resources by Participant Characteristics

Variable	*N*	*f*	*p*
Gender	179	4.853	0.029
Race	177	1.962	0.144
Education Level	166	0.491	0.782
Job Assignment (Security Level)	179	0.356	0.840
Job Location/Setting	177	0.485	0.617
Area of Practice	179	8.929	0.003 *

*α=.008

Relationships of variables within the category of human resources were also high, so human resources were treated as one variable. Composite scores were tabulated for responses regarding the use of human resources (staff in the facility, staff outside a facility, staff outside a discipline, staff in their unit, friends, spouse or family members, and other). Missing observations were eliminated. The variance was spread among the six variables resulting in $\alpha = 0.008$) since comparisons would be made among the items. The analysis of variance revealed a significant difference in one independent variable. Area of practice (administrative or direct service providers) was found to be significantly different (f=20.343; p= 0.003). The analysis of variance indicated that administrators or managers were more likely to utilize human resources than direct service providers when learning or making changes. This also may be due to the very nature of the job itself. Administrators and managers are primarily involved on a daily basis with staff. They supervise, direct projects, conduct meetings, and interact primarily with staff within the department. Therefore administrators and managers are likely to have a significant

number of contacts that can be utilized as resources when adopting change or learning. This would be especially true of those administrators and managers who have worked in the department of any extended period of time. The mean number of years of corrections experience of participants in the survey was 11.438 (n=180). Table 10 presents the analysis of variance of the utilization of human resources and participant characteristics. Specific ANOVA tables are found in Appendix L.

TABLE 10

The Utilization of Human Resources and Participant Characteristics

Variable	*N*	*f*	*p*
Gender	179	2.220	0.100
Race	177	1.673	0.191
Education Level	166	1.391	0.230
Job Assignment (Security Level)	179	1.586	0.180
Job Location/Setting	179	3.190	0.044
Area of Practice	179	20.343	0.000*

*α=.008

Variables within the category of training resources were found to have significant relationships. Therefore the category of human resources was also treated as one variable. Composite scores were utilized as a dependent variable to analyze the use of training as a resource by participants. Responses to each of the items (departmental training programs, training workshops, outside training by other agencies, nationally sponsored programs, and other) were tabulated for responses regarding the use of training as a resource. Missing observations were eliminated. The variance was spread among the

six variables resulting in $\alpha = 0.008$ since they would also be compared. The analysis of variance indicated no significant differences in the independent variables. This finding indicates staff utilizes training as a resource in the same way, regardless of gender, race, education level, job assignment, job location, or area of practice. This finding may be due to demonstrative of the training requirements of all staff within agency. All staff are required to attend training on an annual basis (ODOCi, 2000). The minimum hours and subjects required depend on the job assignment and professional practice area of the employee. Since all staff are required to obtain training on an annual basis, this may explain the similarity in the utilization of training as a resource. Table 11 depicts the summary of the results of the analysis of variance and specific ANOVA tables are found in Appendix M.

TABLE 11

The Utilization of Training Resources and Participant Characteristics

Variable	*N*	*f*	*p*
Gender	179	2.882	0.091
Race	177	2.870	0.059
Education Level	166	1.450	0.209
Job Assignment (Security Level)	179	1.080	0.368
Job Location/Setting	179	2.998	0.052
Area of Practice	179	3.488	0.063

Years of experience were correlated with the dependent variables of utilization of material resources, human resources and training resources. The results of the correlation indicated a weak to moderate positive correlation ($r= 0.204, p= 0.006$) of years of service and the use of human resources. Although this finding is significant statistically, the correlation is not large enough to be meaningful. Years of service were also correlated positively but weakly ($r= 0.153, p= 0.04$) with training. Although this finding was significant, the correlation was also not strong enough to consider it to be a meaningful finding. Table 12 indicates the correlation scores.

TABLE 12

Correlations of Years of Experience and Resource Used

	Years of Experience
Materials	0.105
Human Resources	0.204*
Training	0.153*

* = 0.05

Research Question 5

The fifth research question, *Does the work environment affect change and learning among corrections professionals?* was addressed by the comparing background information given in the first section of the survey with responses indicating size and complexity of change. It provides the results needed to examine the hypothesis that characteristics of the work environment are associated with change. Each participant identified the level of security or place of assignment. The choices were maximum and

medium, minimum, community, headquarters, and multiple sites. The size and complexity of change reported was covered by survey items 4 and 5. The work environment characteristics were covered in survey item 8.

An ANOVA was run to determine if there were differences in the dependent variables with size and complexity of change reported by respondents, and the independent variable of the level of security or location of job assignment. There were no significant differences in the dependant variable, size or complexity of change reported, based on the independent variable of job assignment of participants.

Correlations were conducted to determine if there were significant relationships with the size and complexity of change reported by respondents with regard to factors in the work environment. Survey item 8 considered five factors in the work environment with regard to changes made: supervisor encouragement; supervisor participation; colleague support; autonomy; and an openness or supportiveness for change. Table 13 indicates the correlation scores.

TABLE 13

Correlations of Size and Complexity of Change and Work Environment

	Change	
	Large	Complex
Supervisor encouragement	0.309	0.342
Supervisor participation	0.207	0.132
Colleague support	0.122	0.157
Autonomy	0.102	0.074
Supportive environment	0.083	0.120

Supervisory encouragement was significantly correlated with the size and complexity of the change ($r = 0.309, p = 0.000$). This finding indicates that when change needed is both large and complex, supervisory encouragement was critical to accomplish

the change. Supervisory participation was significantly correlated (r= 0.207, p= 0.007) with regard to the size of change, but the correlation was weak and may not be meaningful.

Research Question 6

The sixth research question, *Do length of service and gender affect the extent of change and learning in the corrections professional?* was addressed by survey items 4 and 5 and the background section of the survey. The specific hypothesis related to this research question is: the length of service and gender is associated with the types of resources used by correction professionals.

An ANOVA was conducted to determine if there was a difference between male and female respondents with regard to the extent of change (size and complexity) of change reported. Testing the mean differences between males and females showed no significant differences in the size or complexity of change reported. The correlations between length of service and extent of learning were not significant.

Research Question 7

The seventh question, *Can one predict the extent of change according to the differences in forces and images of change,* was addressed by survey items 3, 4, 5 and 6. Survey item 3 indicated which forces motivated a change; survey item 4 indicated the size of change; survey item 5 identified the complexity of change reported; and survey item 6 indicated the respondents' image of the change. Item 6 measured how clear the change was when the change began, the extent to which the change fit well with other practices, the extent the change would be better, the extent to which the change would help financially, and the extent to which change could be "practiced" before

implementation. The specific hypothesis related to this research question is: the extent of change is associated with the forces and image of change. Stepwise multiple regression analysis was used to analyze data.

First, correlations were run on the size and complexity of change with the ten identified forces for change and images of change. Table 14 depicts the result of the data analysis.

TABLE 14a

Correlation of Size and Complexity of Change and Forces of Change

Forces of Change	Change Reported Large	Complex
Personal Interest	0.118	0.161
Improve Quality of Life	0.038	0.032
Career Stages	0.127	0.140
Competence	0.064	0.159
Financial Gain	0.129	0.169
Relating to Others	0.081	0.157
Relating to Higher Ed	0.020	0.059
Regulations	0.080	0.046
Family and Community	0.200*	0.237*
Work Environment	0.321*	0.201*

* $\alpha = .05$

Table 14b

Image of Change	Change Reported Large	Complex
Change is clear	0.030	0.065
Change Fits Well	0.146	0.032
Change is Better	0.176*	0.064
Financial Gain	0.121	0.196*
Try Before Practice	0-.055	0.103

$\alpha = .005$

Family and community was found to be significant with regard to size of change (r= 0.200, p= 0.009) complexity of change (r= 0.237,p= 0.002). Work environment was found to be significantly correlated with large change (r= 0.321, p= 0.000) and complex change (r= 0.201, p= 0.009).

All ten forces of change were utilized in a regression analysis to determine the best model of these variables to predict the extent of change. Stepwise regression indicated the combination of three forces for change: work environment, family and community, and regulations, best predicts large change (f=10.994; p= 0.000). Of the three forces of change, work environment enters the model first. Next, family and community enter the model, followed by regulations, which is negatively associated with large change. The equation for the analysis is large change= (0.03) work environment+ (0.23) family and community+ (- 0.19*) regulations*. An R^2 of 0.15 explains 15% is of the variance found in size of change. This means that two positive and one negative factor come together and best predict how it is that forces of change influence large change. The results of the stepwise regression reinforce the previous finding that work environment is important in assisting the participant in making changes that are large in nature. Table 15 presents the results of the stepwise regression.

Table 15a

Stepwise Regression of Forces of Change and Size of Change

	Sum of Squares	*df*	Mean Square	F	Sig
Regression	26.46	3	8.82	10.99	0.000
Residual	141.21	176	.80		
Total	167.67	179			

R^2=.15

Table 15b

Summary of Multiple Stepwise Regression Analysis for Forces of Change Variables Predicting Size of Change (N=179)

Variable	B	SE B	β
Step 1			
Work Environment	0.26	0.06	0.31
Step 2			
Family and Community	0.12	0.05	0.16
Step 3			
Regulations	-0.14	0.05	-0.19

R^2=.15

Stepwise regression was also utilized to analyze forces for change and complexity of change. Family and community and work environment were the best predictors for complexity of change ($f = 8.406$; $p = 0.00$). Of the two forces of change, which best predict complex change, family and community enter the model first followed by work environment. The equation is complex change= (0.21) family and community/work+ *(0.17) environment.* This finding explains 7% of the variance for

complex change with $R^2 = 0.07$. This means that two positive factors combine to best predict how forces of change influence learning as it relates to complex change. Stated another way, the combination of professional and personal relationships is the best predictor of complex change, however they account for only 7% of the variance. Once again, work environment, an external force, is a significant factor in change. When work environment is combined with personal aspects (family and community), the perception of change is seen as more complex. Table 16 presents the results of the stepwise regression.

Table 16a

Stepwise Regression of Forces of Change and Complexity

	Sum of Squares	*df*	Mean Square	F	Sig
Regression	16.81	2	8.40	8.02	0.000
Residual	185.29	177	1.04		
Total	202.11	179			

R^2=0.07

Table 16b

Summary of Multiple Stepwise Regression Analysis for Variables Predicting Complexity of Change (N= 179)

Variable	B	SE B	β
Step 1			
Family and Community	0.17	0.05	0.21
Step 2			
Work Environment	0.16	0.06	0.17

R^2=0.07

With regard to the association of the image of change and the size of change, it was determined large change is best predicted by the extent to which the change is perceived by the employee to be better than previous practice (f=5.659; p= 0.01). The equation for the analysis is *large change=(0.17) better*. The R^2 equals 0.03, which explains 3% of the overall variance. This finding indicates that the best predictor for accomplishing a large change on the part of the employee is the perception that the change will be beneficial once accomplished. However the equation only explains 3% of the variance so one suspects the power of the relationship as an explanation of size of change.

With regard to which characteristics of images of change best predict the complexity of change, it was determined that the desire for financial gain was the best predictor (f=7.026, p= 0.00). The stepwise regression indicated that one positive factor (the desire for financial gain) best predicted complex change. The equation is *complex change=2.98 + (0.15) financial gain*. This finding may indicate that the employee perceives that making a complex change will result in being rewarded with financial gain. Table 17a and 17b presents the results of the analysis of the images of change and the size and complexity of change.

Table 17a

Stepwise Regression and Images of Change and Size of Change

	Sum of Squares	*df*	Mean Square	F	Sig
Regression	5.16	1	5.16	5.65	0.018
Residual	162.50	178	0.91		
Total	167.67	179			

$R^2 = 0.03$

Table 17b

Summary of Multiple Stepwise Regression Analysis for Image of Change Variables Predicting Size of Change (N=179)

Variable	B	SE B	β
Step 1			
Balance will be better	0.16	0.06	0.17

$R^2 = 0.03$

Table 18a

Stepwise Regression of Images of Change and Complexity of Change

	Sum of Squares	*df*	Mean Square	F	Sig
Regression	7.67	1	7.67	7.02	0.009
Residual	194.43	178	1.09		
Total	202.11	179			

$R^2 = 0.03$

Table 18b

Summary of Multiple Stepwise Regression Analysis for Image of Change Variables Predicting Complexity of Change (N=179)

Variable	B	SE B	β
Step 1			
Change equals financial gain	0.15	0.05	0.19
$R^2 = 0.03$			

Once again, however, the amount of variance accounted for by the equation is only 3%, making the strength of the explanation weak at best.

Research Question 8

The eighth research question, *Can one predict the extent of change based on the kinds of resources used to learn and change,* was addressed by survey items 4, 5, and 7. Survey item 4 indicates the size of change, item 5 identifies the complexity of change, and item 7 identifies the resources utilized in making change as reported by the participants. The specific hypothesis related to the research question is: the extent of change (size and complexity of change) is associated with the kinds of resources used to make changes.

A correlation was conducted with regard to size and complexity of change and material, human, and training resources utilized by respondents. More variables are associated with complexity of change than size of change. The findings were significant

but not very helpful due to the low levels of association. The results of the correlation are depicted in Appendix M.

Stepwise regression was used to determine the best model for predicting size and complexity of change (extent of change) with regard to material, human, and training resources used in making change. With regard to what best predicts large change, the results show that "other" resource material was the best predictor of large change (f=6.771; p= 0.010). Neither human resources nor training resource predicted large change. The equation is *large change=(0.19) other*. The R^2 is 0.03, which explains only 3% of the variance. This means that other materials identified by the respondents best predict how learning occurs and produces large change. Coupled with the low number and diversity of responses to the category "other," this result is also not very helpful for understanding the nature of the relationship among resources and size and complexity of changes.

Stepwise regression was utilized to predict complex change with regard to material, human, and training resources. It was determined that complex change is best predicted by the combination of "other" and audio material resources (f=8.319; p=0.000). Of the material resources, "other" enters the model first. It is followed by audio material resources. The equation for the analysis is *complex change=(0.21) other +(0.17) audio*. This explains 7% of the variance (R^2 =0.07). These two positive factors combine to best predict how it is that material resources are used in learning and making complex change. The use of human resources did not significantly predict complexity of change. Training outside the agency was also found to be the best predictor of complex change (f=4.495; p= 0.035). The equation is complex change=(0.15) training outside. This explains 2% of

the variance ($R^2 = 0.02$). This finding means that when training resources are used, outside training (not offered by the Oklahoma Department of Corrections) best predicts how it is that learning is used to make complex change. Tables 19, 20, and 21 depict the results of stepwise regression analyses. It appears that few specific resources provide useful models to predict the size and complexity of change. Every major change, no matter how large or complex, is different and may require resources specific to that project or problem.

Table 19a

Stepwise Regression Size of Change with Material Resources

	Sum of Squares	*df*	Mean Square	F	Sig
Regression	6.12	1	6.12	6.74	0.010
Residual	161.55	178	0.90		
Total	167.67	179			

$R^2 = 0.03$

Table 19b

Summary of Stepwise Regression Analysis of Material Resource Variables Predicting Size of Change

Variable	B	SE B	β
Step 1			
"Other"	0.10	0.04	0.19

$R^2 = 0.03$

Table 20a

Stepwise Regression of Complexity of Change with Material Resources

	Sum of Squares	*df*	Mean Square	F	Sig
Regression	17.15	2	8.57	8.20	0.000
Residual	184.96	177	1.04		
Total	202.11	179			

$R^2 = 0.07$

Table 20b

Summary of Stepwise Regression Analysis for Material Resource Variables Predicting Complex Change

Variable	B	SE B	β
Step 1			
Other	0.13	0.04	0.21
Step 2			
Other and Audio	0.17	0.07	0.17

R^2=0.07

Table 21a

Stepwise Multiple Regression of Training Resources with Complex Change

	Sum of Squares	*df*	Mean Square	F	Sig
Regression	5.04	1	5.04	4.55	0.034
Residual	197.06	178	1.10		
Total	202.11	179			

R^2=0.02

Table 21b

Summary of Multiple Stepwise Regression of Training Variables Predicting Complex Change

Variable	B	SE B	β
Step 1			
Outside Department	0.11	0.05	0.15

R^2=0.02

Summary

This chapter has attempted to answer eight research questions which guided the study. Five hypotheses were also presented to assist in answering the research questions. The following is each hypothesis and the results of the data analysis associated with each.

Hypothesis 1: Resources are utilized differently by different types of corrections professionals.

There is a range of responses indicating how often resources was used by corrections professionals in the survey. Some resources were reported to be rarely used, while others are reported to be more utilized and meaningful as it relates to making change.

There were significant differences in the use of material resources and human resources the respondents' area of practice. All other participant characteristics with the exception of "area of practice" were not related to the characteristics of respondents.

Hypothesis 2: The security level of the institution and support from supervisors and co-workers is associated with the change and learning of the corrections professional.

The encouragement and participation of the supervisor within the work setting is significantly correlated with both the size and complexity of change by corrections professionals in the Oklahoma Department of Corrections.

Hypothesis 3: Length of service and gender are associated with the learning strategies and types of resources used by corrections professionals.

Although gender was not associated with types of learning resources used by respondents, length of service was associated with differences in the types of resources used for learning.

Hypothesis 4: The extent of change (size and complexity) is associated with the forces and images of change.

Analysis of responses indicated that there was not a statistically significant relationship among forces for change or image of change except for family and community forces, and work environment. With regard to image of change, the image that change would be "better" was found to be significantly related to size of change. In

addition, the image of a financial gain was found to be significantly related to complex change. Regulation was found to have a negative relationship with size of change.

Hypothesis 5: The extent of change is associated with the kinds of resources used to make changes.

Although there were statistically significant relationships evident from the analysis, none were strong or meaningful.

There were significant and meaningful findings. When all 10 forces of change were utilized in a regression analysis, it was found that larger changes are best predicted by three factors: work environment, family and community, and regulations. Positive associations were found between the size of change and one's work environment, and one's family and community. Large change was negatively associated with the presence of regulations as a force of change. Complex change is also best predicted by the two positive associations: family and community and work environment. With regard to image of change predicting size or complexity of change, it was found that regulation had a negative association with size of change. The image of a change "being better" from a previous practice was the best predictor for larger change. In addition, complex change was best predicted by the perception that one would experience financial gain by making the change.

It is apparent that significant relationships, including those at work and within the family or a community of friends, are of utmost importance to the corrections professional in Oklahoma in making large change. Large change is most influenced by the individual's perception that making the change will be an improvement over previous practices. Complex change made by the corrections professional in Oklahoma is most

influenced by the perception on the part of the individual that the change would bring about financial gain. In both instances of large and complex change, regulations were a negative factor in making change.

CHAPTER FIVE

Conclusions

The discussion and conclusions of the study will be introduced by a summary of the findings and how they relate to the literature on change and learning. This chapter also includes a discussion of what the findings may mean with regard to training of correctional employees in the Oklahoma Department of Corrections. Recommendations for future research will also be included.

Conclusions and Discussion

The purpose of the study was to determine the types of change that were made by corrections professionals in the Oklahoma Department of Corrections, the forces that may have caused the changes, and the resources used in making change. Eight research questions guided the study. A mail survey was utilized to answer eight research questions. In response to a mail survey of 389 professional correctional employees in the Oklahoma Department of Corrections concerning changes made in practice, 180 (43 %) useable replies were received.

The first research question asked, *What changes did the professional practitioner in corrections adopt over the last two years?* The reported changes were analyzed qualitatively to determine categories. Six general "themes" emerged. The categories were defined as changes due to the following: (1) System changes: a change characterized by external forces such as modifications in the law or changes in operational practice. (2) Technological innovations: a change due to innovations in a technology. (3) Supervisory practices: a change made by a supervisor in management style or communication style. (4) Administrative management practices: a change made due to learning new management tools. (5) Service delivery: a change in

how direct service is provided. (6) New Assignment: a change made due to a promotion or a new job assignment.

System changes accounted for 24.4% of change reported. The other percentages of change reported are: technological innovations (6.1%), supervisory practices (8.9%), management practices (18.3%), service delivery (27.8%), and job change (14.4%). The responses indicated corrections professionals did in fact report making a change in practice over the last two years. In the six categories of change identified, four of the six are characterized by being externally driven; that is, some external force initiates the change. Change reported in the categories of system change, technology, service delivery, and job change represented 72.7% of change reported, indicating some force "outside" the individual initiated the majority of change reported. This finding is unlike what was discovered in the Fox et al. study (1989) where it was found that the greatest number of changes made by physicians were associated with professional forces in combination with personal forces. The finding also is unlike what was discovered by Price (1997) with architects. Price also found that architects in his study reported the greatest number of changes were associated with professional forces in combination with personal or "firm" choices. Change by corrections employees were most frequently initiated by some influence beyond "self." Since most change reported by corrections employees was in fact not self-initiated, the finding may indicate that corrections employees may prefer the status quo to change. The "institutionalized" environment that is inherent in the way prison bureaucracies are shaped may affect employees in the highly ordered prison system. Corrections employees in the Oklahoma Department of Corrections may more often than not, wait for direction instead of self-directing change.

The next research question asks *What forces caused the change in practice or procedure?* The reported changes were analyzed quantitatively as well as qualitatively. In part one of the survey item, there were three "forced" choices in the question. Of the three "forced" choices, respondents reported 24.4% of changes were due to policy, 24.45% of changes were made as the result of the desire to improve effectiveness, and 10.6% of changes were made to improve efficiency. Other reported changes were analyzed qualitatively to derive categories. Two categories emerged: job change, which reflected 11.1% of change reported; and multiple causes (defined as a combination of forces) represented 22.8% of the responses. Twelve participants (6.7%) chose not to respond to the question. The second part of the question is based on Fox et al.'s ten forces of change. The force of change with the highest mean score is work environment (3.83), which is an external force, and the lowest mean score is higher education (2.18), which is an internal factor. This finding also indicates that corrections employees in the Oklahoma Department of Corrections institute change more frequently when it is externally driven versus when it is internally initiated. As stated previously, this differs from the findings of Fox et al. (1989) and Price (1997).

The third research question asks, *What resources were used in making changes?* Resources used by corrections professionals in the Oklahoma Department of Corrections were used in varying degrees. Some respondents reported using material, human, and training resources rarely, while others reported utilizing them more often. With regard to the use of material resources, all materials were reported to be used some, with audio materials being used the least. The material resource reported most used by respondents was "other." Those were materials that were not generally associated with topics related

to "correctional" interests. The second type of resource used in adapting change addressed the use of "human resources." The human resource category was expanded in the survey to identify the persons within and outside the work environment who were useful to the participants in making change. The results indicated that material, human, and training resources were utilized by most respondents.

Most respondents indicated that the changes they made showed a high degree of relative advantage over previous practices. In addition, most respondents reported they rarely tried out a change before adopting it. This finding is consistent with the radiologists study by Fox et al. (1997) and the study of architects (Price, 1997). Corrections employees in Oklahoma reported a higher use of training resources than radiologists reported in the Fox et al. study (1997).

The fourth research question was *Do professionals in corrections utilize resources differently?* There was a significant difference in the use of material resources and human resources as it relates to a professional's area of practice within the field of corrections. Respondents who were administrators in the Oklahoma Department of corrections were more likely than direct service staff to use material resources and human resources in making changes. Years of service were positively related to the use of the use of human resources and training resources. There was no reference to this finding contained in the literature.

The fifth research question asks *Does the work environment affect change and leaning among corrections professionals?* There was no significant difference in the security levels of institutions (job location) with regard to the size and complexity of change made. It was initially thought that the security level of the work location would

affect the frequency of change reported. Factors in the work environment that were found to be significant with regard to the size and complexity of change were supervisor encouragement and supervisor participation. This finding differs substantively with the physicians and architects studies. Physicians were reported to frequently rely on the use of "colleagues" in the work place while architects reported less use of collegiate relationships as important in making changes. The term "colleague" implies a relationship that is perceived as mutual in nature, not possessing any degree of power over another. Neither physicians nor architects recognized the importance of an "authority figure" (chief of staff, or managing partner) as being important in making change. Supervisors who influenced change among corrections employees, on the other hand, are in a position of authority over their subordinates. This finding may emphasize the powerful influence of the hierarchical, authoritarian organizational structure found within the correctional environment. This finding also emphasizes the importance of the influence of the supervisor within the correctional environment as it relates to effecting change. The importance of the supervisor's encouragement and participation may also subtly suggest again, that change is "forced" upon the employee.

The sixth research question asks *Does length of service and gender affect the extent of change and learning in the corrections professional?* Size and complexity of change reported by respondents did not indicate a significant difference with regard to gender. There was also no significant difference in length of service and the size and complexity of change. There were no references to this finding in the literature.

The seventh research question asks *Can one predict the extent of change according to the difference in forces and images of change?* Size and complexity of

change can best be predicted by three factors: work environment, family and community, and regulations. Positive associations were found between larger change and the professional's work environment and their family and community.

Work environment was defined in the survey as "change in organization philosophy and direction; new information; or updated equipment." This definition defines some force that is "outside" the person's control. This finding is consistent with the previous discussion regarding change being instituted by some outside force rather than originating from the desire of the individual. This finding supports the view that most change made by corrections employees in Oklahoma are indeed somewhat "forced" upon them.

Larger change was negatively associated with regulations. Regulation was found to be negatively associated with large and complex change among correctional employees. This finding is consistent with the physician's study where physicians reported negativity toward regulations of their practice and reported changes made due to regulations less frequently than other forces of change. Price (1997) reported that architects had less negative feelings toward regulations of their practice.

The importance of family and community as it relates to change is also consistent with the physician's study. Fox et al. (1997) found that structural changes, redirections, and transformations of practice were likely to be associated with personal forces. The evidence that "new or different expectations from family or community" impacts the size of change made by corrections employees supports the previous research of Fox et al.

The same two positive factors, the professional's work environment and their family and community, also best predict complex change by corrections employees. This

finding supports the work of Fox et al. as previously stated with regard to personal forces effecting large, complex, and meaningful change.

According to the research done by Fox et al., image of change also impacts the size and complexity of change. Among physicians, clarity of the forces for change was greatest when the change related to professional competency. The image of change was less clear for physicians when change related to social forces. The findings in this study support that of Fox et al. (1997) as large change is best predicted in corrections employees when their image of change is that it will improve competency.

Complex change among corrections respondents in this study can best be predicted when there is the image that financial gain will be the result of making the change. This finding differs from the physician's study. Less than a quarter of physicians reported making more complex change (redirections or transformations) as the result of an image that the change would produce a financial gain (Fox et al., 1997).

The last research question asks *Can one predict the extent of change based on the kinds of resources used to learn and change?* Although some significant relationships were found in the use of resources with regard to the extent of change, none were strong enough to report as a significant finding in the study.

Implications for Education

This study differs from other change studies in several ways. Previous studies of change and learning have been limited primarily to qualitative data. Subjects of study have primarily been from the fields of medicine and architecture. None had been done with regard to professionals who work in the field of corrections, which is in great contrast to the field of medicine, dentistry, and architecture.

The results of the study suggest support for previous assertions regarding change and learning: The incidence of the adoption of innovation among professionals is relatively high; image of change affects the nature of change; learning accompanies change when learning resources are used in making change; and reasons for change affect the nature of change.

Implications for Corrections

The study may have practical significance for the field of corrections. The study lacks generalizability due to the subjects being from one agency only. It may be helpful, however, for practitioners in planning continuing education related to the development of correctional employees in the Oklahoma Department of Corrections. The role of the supervisor in assisting the employee in adopting innovations and significant change has major implications in effecting change and should be considered.

Administrators in corrections may benefit from consideration of the findings in the study. Administrators are often responsible for the successful implementation of change. It is clear that change by correctional employees is a challenging issue. Respondents in the study appear to prefer the status quo to change. Change among correctional staff, even though a high incidence of change was reported, appears to be avoided if possible. Change reported was most frequently initiated by an externally driven force implying that change is somewhat forced on the employee. It also implies a childlike or "institutionalized" dependency of the employee on those who are "in charge." It is recognized that this dependency may be resented, as evidenced by the finding that rules and regulations are considered a negative factor with regard to changes made by correctional employees. This places correctional administrators in a difficult situation, where if change is needed, it must be "forced," only to be resisted and resented

by staff. Evidence from this study supports that large and complex change is least likely to occur with this model. Administrators would be well served to consider the findings and engage in strategic planning with regard to this topic.

Recommendations for Future Research

It is recommended that follow up studies of change and learning occur in other correctional venues to assess the generalizability of the findings. Since the only respondents to the survey were employees of one correctional agency, it may be helpful to study correctional employees in other local, state, and federal correctional agencies. It is also recommended that a change and learning study be done with other law enforcement agencies as well, since many law enforcement agencies are similar to correctional agencies in many respects.

The study did not address the uses of resources with stages of change and learning. It may be useful to ascertain the use of resources that accompany learning in the different stages of change by correctional employees.

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APPENDICES

Appendix A

Rankin and Fox Survey (1997)

Canadian Association of Radiologists Survey

Number of years in practice:_____ Gender: Female ☐ Male☐

Majority of practice is in an area with a population of:

☐ Less than 20,000 ☐ 20,001 - 50,000 ☐ 50,001 - 100,000

☐ 100,001 - 500,000 ☐ >500,000

University Affiliation: Full-time Faculty ☐ Part time faculty ☐ No Faculty Appointment ☐

An innovation is <u>any change</u> that involves the use of a new procedure, method or technology which changes your practice. For the purposes of this study, please do not confine the use of the term "innovation" to "something that is just out". Such changes are acceptable but we are seeking anything new to YOUR practice.

During the past year, did you adopt an innovation in your practice? yes ☐ no ☐

If yes...please check all that apply below and / or name the innovation in the space provided

	Neuro	Invasive	Vascular	Non-neuro	Other
MRI					
CT					
Ultrasound					
Mammography					
Practice Management					
Other					

Please name your innovation in no more than 3 words: _____

***Primarily*, what caused you to adopt this innovation?**

☐ to improve efficiency ☐ to improve effectiveness

☐ regulation or policy ☐ other (please specify)_____

To what extent was the innovation you wanted to make when you began clear to you?(1=not very clear, 5 = very clear)	**1**	**2**	**3**	**4**	**5**
Please rate this innovation in the checklist below.					
Compatability - The extent to which this innovation fit well with other practices and procedures in your practice.	**1**	**2**	**3**	**4**	**5**
Relative *clinical* advantage - The extent to which this innovation was better than what it replaced in your practice.	**1**	**2**	**3**	**4**	**5**
Relative *financial* advantage - The extent to which this innovation provided a financial advantage to your practice.	**1**	**2**	**3**	**4**	**5**
Complexity - The extent to which you consider the adoption of this innovation to be particularly simple (1) vs particularly complex (5).	**1**	**2**	**3**	**4**	**5**
Trialability - The extent to which you had an opportunity to try this innovation out before you began to use it in your practice.	**1**	**2**	**3**	**4**	**5**

Please take some time to thoroughly and completely read the next section related to the stages of change.

Changes made in ones practice may take place in recognizable stages.

First, it must become clear to you that a change is necessary and that you need to learn something new. This is the stage of **assessment of needs.**

Secondly, you have to become knowledgeable and skillful with the new practice. This is the stage of **developing the competence needed to practice differently.**

Thirdly, the change has to be made to fit your practice situation. This is the **stage of implementation.**

Using this framework for change, the following questions ask for details of how you effected each stage.

Assessing your learning needs *- The following are some resources used to learn about your needs connected with this change. Please rate each item as to the extent to which you used this resource to recognize your need to investigate this potential change.*

Did you attempt to assess your own needs to learn more about using this innovation? yes ☐ no ☐

If yes...did you use any material resources? yes ☐ no ☐

If yes..please identify each material you used and rate it according to the extent of use

Material Resources	**Did not use**	**Low use**				**High use**
Journals	0	1	2	3	4	5
Texts	0	1	2	3	4	5
Technical brochures/manuals	0	1	2	3	4	5
Audio tapes	0	1	2	3	4	5
Video tapes	0	1	2	3	4	5
Reference books	0	1	2	3	4	5
Other (Please Identify)_____	0	1	2	3	4	5

Did you use colleagues to identify what you needed to learn? yes ☐ no ☐

If yes...please identify each human resource you used and rate it according to the extent of use

Human Resources	**Did not use**	**Low use**				**High use**
Another radiologist in my office	0	1	2	3	4	5
Another radiologist in my hospital	0	1	2	3	4	5
Another radiologist outside my community	0	1	2	3	4	5
Another specialist	0	1	2	3	4	5
A primary care physician	0	1	2	3	4	5
Another health professional	0	1	2	3	4	5
Other (Please identify)_____		0	1	2	3	4	5

Did you use any formal CME programs? yes ☐ no ☐

If yes...please identify each program you used and rate it according to the extent of use

CME programs	**Did not use**	**Low use**				**High use**
Rounds	0	1	2	3	4	5
Grand rounds	0	1	2	3	4	5
Local medical school programs	0	1	2	3	4	5
Regional medical school programs	0	1	2	3	4	5
National medical school programs	0	1	2	3	4	5
Regional specialty society programs	0	1	2	3	4	5
National specialty society programs	0	1	2	3	4	5
Pharmaceutical or equipment company programs	0	1	2	3	4	5
Other (please identify)_____	0	1	2	3	4	5

Developing your competence or ability to use this new practice *- The following are some resources you may heave used to acquire knowledge and skill related to this change. Please rate each as to the extent to which this resource helped you develop this new area of competence.*

Did you seek or attempt to develop any specific competencies or skills? yes ☐ no ☐

Did you use reading materials? yes ☐ no ☐

If yes...please identify each material you used and rate it according to the extent of use

Material Resources	**Did not use**	**Low use**				**High use**
Journals	0	1	2	3	4	5
Texts	0	1	2	3	4	5
Technical brochures/manuals	0	1	2	3	4	5
Audio tapes	0	1	2	3	4	5
Video tapes	0	1	2	3	4	5
Reference books	0	1	2	3	4	5
Other (Please identify)_____	0	1	2	3	4	5

Did you use colleagues to identify what you needed to learn? yes ☐ no ☐

If yes...please identify each human resource you used and rate it according to the extent of use

Human Resources	**Did not use**	**Low use**				**High use**
Another radiologist in my office	0	1	2	3	4	5
Another radiologist in my hospital	0	1	2	3	4	5
Another radiologist outside my community	0	1	2	3	4	5
Another specialist	0	1	2	3	4	5
A primary care physician	0	1	2	3	4	5
Another health professional	0	1	2	3	4	5
Other (Please identify)_____	0	1	2	3	4	5

Did you use any formal CME programs? yes ☐ no ☐

If yes...please identify each program you used and rate it according to the extent of use

CME programs	**Did not use**	**Low use**				**High use**
Rounds	0	1	2	3	4	5
Grand rounds	0	1	2	3	4	5
Local medical school programs	0	1	2	3	4	5
Regional medical school programs	0	1	2	3	4	5
National medical school programs	0	1	2	3	4	5
Regional specialty society programs	0	1	2	3	4	5
National specialty society programs	0	1	2	3	4	5
Pharmaceutical or equipment company programs	0	1	2	3	4	5
Other (please identify)_____	0	1	2	3	4	5

Implementation of the change *- The following are some resources used to fit this change into your practice. Please rate each as to the extent to which each resource was used to learn how to implement this change.*

When it came time to actually use this innovation in your practice, did you have to learn anything to "make it fit into" your routine or other existing practices? yes ❑ no ❑

If yes.. **Did you use reading materials?** yes ❑ no ❑

If yes..please identify each material used and rate it according to the extent of use

Material Resources	**Did not use**	**Low use**					**High use**
Journals	0	1	2	3	4	5	
Texts	0	1	2	3	4	5	
Technical brochures/manuals	0	1	2	3	4	5	
Audio tapes	0	1	2	3	4	5	
Video tapes	0	1	2	3	4	5	
Reference books	0	1	2	3	4	5	
Other (Please identify)_____		0	1	2	3	4	5

Did you use colleagues to identify what you needed to learn? yes ❑ no ❑

If yes..please identify each human resource you used and rate it according to the extent of use

Human Resources	**Did not use**	**Low use**					**High use**
Another radiologist in my office	0	1	2	3	4	5	
Another radiologist in my hospital	0	1	2	3	4	5	
Another radiologist outside my community	0	1	2	3	4	5	
Another specialist	0	1	2	3	4	5	
A primary care physician	0	1	2	3	4	5	
Another health professional	0	1	2	3	4	5	
Other (Please identify)_____		0	1	2	3	4	5

Did you use any formal CME programs? yes ❑ no ❑

If yes...please identify each program used and rate it according to the extent used

CME programs	**Did not use**	**Low use**					**High use**
Rounds	0	1	2	3	4	5	
Grand rounds	0	1	2	3	4	5	
Local medical school programs	0	1	2	3	4	5	
Regional medical school programs	0	1	2	3	4	5	
National medical school programs	0	1	2	3	4	5	
Regional specialty society programs	0	1	2	3	4	5	
National specialty society programs	0	1	2	3	4	5	
Pharmaceutical or equipment company programs	0	1	2	3	4	5	
Other (please identify)_____		0	1	2	3	4	5

Did you use any other source of information/ knowledge or skill? yes ❑ no ❑

At the end of the learning process, were you satisfied with the outcomes? yes ❑ no ❑

Was the approach you took to adopt this innovation: Typical for you in most respects❑Typical for you in some respects❑Not typical in most respects❑

Thank you for taking time to participate in this study. Please mail the following items from the survey in the self-addressed envelope that has been provided.

Appendix B

Oklahoma Corrections Staff Survey

Oklahoma Corrections Staff Survey

The purpose of this study is to determine if changes are occurring in correctional practice, and if so, what kind of changes are occurring.

Please take a few moments to answer the following questions about yourself:

Part 1: Background Information

Gender: Female ☐ Male ☐

Race: African American ☐ Asian American ☐
Caucasian ☐ Hispanic ☐
Other ☐ _____

Education: High School Degree ☐ Some College ☐
College Degree ☐ Advanced Degree ☐
Specify _____

Years of corrections experience _____

My current job assignment is at:

Maximum / Medium ☐
Minimum ☐
Community ☐
Other (multiple locations) ☐

Which of the following best describes the setting where you work?

Metropolitan ☐ Rural ☐ Other (multiple settings) ☐

Area of practice:

☐ Administration/management (includes all supervisory positions).

☐ Professional/direct service (provides direct service to inmate population and includes nursing, teaching, pharmacy, dentists, doctors, and psychologists).

Part 2: Survey Questions

For this study, change may be thought of as a large or small alteration in what you do in the everyday performance of your duties to meet the mission.

You will want to think about a change you have made or experienced. Areas where you may have experienced a change are: in how you supervise staff or inmates; in clinical practices; in technical areas; or in how you feel or view your part in meeting the mission of the agency.

1. Please take a moment and reflect on the most important change in the way you perform your work in the last two years.

   Please write a brief description. My most important change was:

   _____
   _____
   _____
   _____

2. Primarily, what caused you to make the change in practice?

   ☐ To be improve efficiency ☐ Policy Change ☐ To improve effectiveness

   ☐ Other: Please explain _____

3. How much were each of the following factors a motivation for adapting your change?

	Very little				*Very much*
Personal Interest or Curiosity	1	2	3	4	5
Desire to Improve Quality of Life (to reduce stress, improve mental or physical health)	1	2	3	4	5
Career stages (starting, growing, transitioning out)	1	2	3	4	5
Competence (seeking improved ways of practicing) dissatisfied with current procedures and looking for other alternatives)	1	2	3	4	5
Financial Gain (seeking more compensation)	1	2	3	4	5
Relating to others (involvement in professional organizations, peer support or expectations, networking with others)	1	2	3	4	5
Relating to involvement with higher education (attendance and participation in degree or advanced degree programs)	1	2	3	4	5
Regulations (Certification or licensing)	1	2	3	4	5

Family and community (new or different expectations from family or community)	1	2	3	4	5
Work environment (change in organization philosophy and direction; new information; updated equipment)	1	2	3	4	5

Is there a particular event that caused you to make a change or that lead you in a different approach, attitude, or direction in how you do your job? (Personal event such as divorce, marriage; job demotion or promotion; health change)

Yes ☐ No ☐

If yes, please describe the event:

_____

_____

_____

4.	Please rate your "change" on how large you think it was.	*Small* 1	2	3	4	*Very Large* 5
5.	The changes or innovations that I have Made have been (1) simple vs. (5) complex.	*Simple* 1	2	3	4	*Complex* 5
6.	To what extent was the change you made clear to you when you began?	*Not Clear* 1	2	3	4	*Very Clear* 5
	The extent to which the change fit well with other practices.	1	2	3	4	5
	The extent to which the change would be better.	1	2	3	4	5
	The extent to which this change would help you financially.	1	2	3	4	5
	The extent to which you had an opportunity to try it out before changing practice.	1	2	3	4	5

7. How much did you use each of the following activities for learning related to planning, making or considering a change?

Materials: Did you use material resources to help you learn?	*Did not use*		*Very little*		*Very Much*
Professional journals	0	1	2	3	4
Video tapes	0	1	2	3	4
Audio tapes	0	1	2	3	4
Texts	0	1	2	3	4

Other _____	0	1	2	3	4

Human Resources: Did training assist you in learning?	*Did not use*	*Very little*			*Very much*
Staff in my facility	0	1	2	3	4
Staff outside my facility	0	1	2	3	4
Staff outside my "discipline"	0	1	2	3	4
Friends	0	1	2	3	4
Spouse/family members	0	1	2	3	4

Training Programs: Did you use training programs?	*Did not use*	*Very little*			*Very much*
Departmental training programs	0	1	2	3	4
Training workshops (OK Correctional Assoc., NABCJ, ACA, SSCA, CIA)	0	1	2	3	4
Outside training by other agencies (law enforcement, hospital, mental health)	0	1	2	3	4
Nationally sponsored programs (NIC, Dept. of Justice)	0	1	2	3	4

8. Please indicate level of agreement with the following statements:

		Strongly Disagree				*Strongly Agree*
1.	I was encouraged by my supervisor to pursue this change.	1	2	3	4	5
2.	My supervisor participated in helping me adopt the change.	1	2	3	4	5
3.	Another colleague(s) was most instrumental in assisting me in making a change.	1	2	3	4	5
4.	I was not allowed any freedom by my supervisor to try an innovation before I adopted a change.	1	2	3	4	5
5.	The environment in which I	1	2	3	4	5

work is supportive of new ways
of performing work activities.

Any comments you would like to make that may help us understand how you make or adopt changes in what you do would be appreciated.

Thank you.

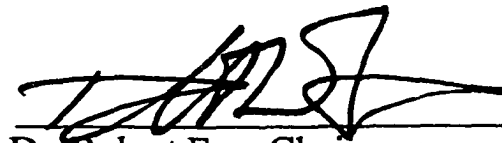
Please mail the survey in the self-addressed envelope that has been provided.

Appendix C
Change and Learning Among Oklahoma Corrections Staff

CHANGE AND LEARNING AMONG

OKLAHOMA DEPARTMENT OF CORRECTIONS STAFF

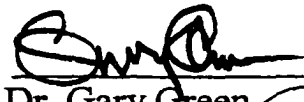
Approved by:



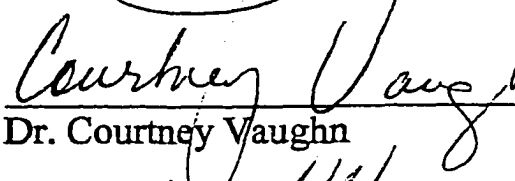
Dr. Robert Fox, Chairman



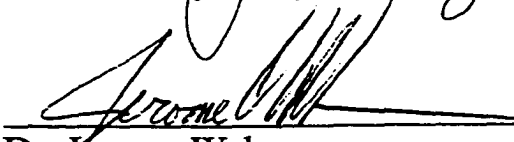
Dr. Michael Buckley



Dr. Gary Green



Dr. Courtney Vaughn



Dr. Jerome Weber

Date: May 31, 2000

Appendix D

Letter From University of Oklahoma's Office of Administration

The University of Oklahoma

OFFICE OF RESEARCH ADMINISTRATION

July 10, 2000

Ms. Mary L. Livers
10608 Bishops Gate
Oklahoma City OK 73162

Dear Ms. Livers:

Your research application, "Change and Learning Among Oklahoma Department of Corrections Staff," has been reviewed according to the policies of the Institutional Review Board chaired by Dr. E. Laurette Taylor and found to be exempt from the requirements for full board review. Your project is approved under the regulations of the University of Oklahoma - Norman Campus Policies and Procedures for the Protection of Human Subjects in Research Activities.

Should you wish to deviate from the described protocol, you must notify me and obtain prior approval from the Board for the changes. If the research is to extend beyond 12 months, you must contact this office, in writing, noting any changes or revisions in the protocol and/or informed consent form, and request an extension of this ruling.

If you have any questions, please contact me.

Sincerely yours,

Susan Wyatt Sedwick

Susan Wyatt Sedwick, Ph.D.
Administrative Officer
Institutional Review Board

SWS:pw
FY00-301

cc: Dr. E. Laurette Taylor, Chair, Institutional Review Board
Dr. Robert Fox, Education

1000 Asp Avenue, Suite 314, Norman, Oklahoma 73019-0430 PHONE: (405) 325-4757 FAX: (405) 325-6029

Appendix E

Cover Page

RESEARCH SURVEY

Cover Page

The purpose of this survey is to determine what changes corrections employees have undertaken in the last two years and if learning played a role in those changes. It would be very much appreciated, if you would complete the survey. It should take only about 10 minutes of your time.

After you have completed the survey, please place it in the pre-addressed, stamped envelope. To protect your anonymity, it will be mailed to a post office box to a research assistant. The research assistant will compile the information and store the information in a locked cabinet.

Enclosed you should find the survey, and a stamped and pre-addressed envelope to the research assistant.

Thank you for your help.

ALL SURVEY RESPONSES WILL REMAIN ANONYMOUS.

YOU ARE NOT REQUIRED TO COMPLETE THIS SURVEY.

PLEASE COMPLETE THE SURVEY AND RETURN WITHIN 10 DAYS.

AGAIN, MANY THANKS FOR HELPING ON THIS PROJECT!!!!!!

Contact the Office of Research Administration at 405-325-4757 or irb@ou.edu regarding any questions you have about your participation.

Please contact Dr. Robert Fox at 405-325-1080 regarding any questions pertaining to this research project.

Appendix F

Responses to "Other" in Survey Item 2

1. Most important change

When I promoted to deputy warden, I began to address both staff and inmate issues in a more direct manner, I.e. I worry less about being politically correct and tackle issues head-on.

Nothing listed

Closed a community correctional center. Absorbed 3 additional counties into our district

More aware and involved in administrative and supervisory duties.

I've become more cautious and aware of the total environment, not just focusing on students in my class.

Providing therapy services to a population in prison requiring stronger empathy skills, safety concerns and dealing with significant impulse control issues.

More guidelines-more requirements as far as how often clients on psychotropic must be seen-more paperwork

Taking more responsibility for my work performance without the prompting of my supervisor of the lackadaisical attitude of co-workers. As a result I am more of self-confident and more of a self-starter.

To be more patient, accept some things the way they were and that you could not change them or where you in a position to change things.

The idea we're doing a lousy job and need micro. Management (Bullock lawsuit)

I have a greater appreciation of ways that the custodial & security functions interact with medical treatment

Transition from line staff to administration

Less stress

Some new equipment

Cross-trained my staff in several areas to increase productivity and effectiveness.

Realizing that staff needs change sometime day to day, and with the diversity in the unit there are no set guidelines as to how to supervise. Look upon every individual as unique.

Developing a continuous quality improvement program

Using my degree to accept a position with more responsibility and broader impact on the dept.

Just started to work at DOC

Neglecting my usual duties due to staff deficiencies that require me to man the pill line and give lay-in medications

I've gone from spending my time applying my skills directly with inmates to performing functions directed toward political correctness e.g. extensive amount of paperwork

Utilizing more programs with offenders. Utilizing assessment instruments to ascertain program

Taking over as acting dept. head

I now collect and analyze my data for accuracy. Prior to now, action was initiated first.

Using the GED 200 system computer

Brought about due to policy changes in the agency and court order settlement

Nothing listed

Number of inmates incarcerated

I haven't changed in the last two years. If it's not broken, don't attempt to fix it.

Enhanced focus on accountability and outcomes. Extensive travel time. Management of disciplinary issues.

Went from a free PT to a captive PT

Pay increase

Positive attitude, no matter how I am treated

Seeing students advance to higher levels

When I became a Sgt. My responsibilities now include doing monthly work evaluations on the facility crew, yard, orderlies, laundry, etc.

Nothing listed

I have become much more involved in the overall general operation of the facility to include security, food service and administration.

To complete my education and hopefully look at promoting in my work.

Became a supervisor 2 yrs ago. Attended numerous supervisory and leadership training which has been very beneficial.

Prompt and courteous to the inmates. Treat them as you would someone outside the facility. Recognize birthdays of your inmate students. Have inmates do stuff for the community even if it's making a craft item for nursing home patience.

Being held accountable for my work

Paying more attention to security and keeping better records.

To staff the locus of learning to a more learner centered approach

Management of the inmate population and mission of the facility

I just started working in corrections - previously worked in hospitals so the method of care is very different than what I am accustomed to.

needs for offenders and using "what Works" information to match offenders specifically with programming rather than the cookie cutter approach.

Nothing listed

In how my scheduling and suspense items were tracked

Expansion for chronic care clinics with increased diligence in follow through

My direct role in managing employees to meet the mission

My direct role in managing employees to meet the mission

Learning to set priorities better. Finding better balance between personal & professional life.

My work requires constant change. Flexibility and adaptability are required every day. Consequently it would be inappropriate to concentrate on just one change.

Having to do an very substantial amount of paper work, while doing this job

New Chief Medical Officer/ New Medical Services Administrator. Slowing down-things don't happen quickly in this system

Nothing listed

Nothing Listed

No significant changes. Hard to initiate change here.

Computer technology becoming more involved in decision-making process.

As a teacher I approach my job with more compassion or empathy than I have in the past. I try to build self-esteem in the inmate.

Little change

1) Ever-increasing responsibility, without corresponding authority. 2) Decisions are mainly from top down, with little input from field staff 3) Less autonomy to direct operations on site and make immediate decisions 4) Severe reduction in inmate privileges.

1) Ever increasing responsibility, without corresponding authority 2) Decisions are mainly from top down, with little input from field staff 3) Less autonomy to direct operations on site and make immediate decisions 4) Severe reduction in inmate privileges

Being much more direct with staff giving fewer options and closer direction.

To develop an intake system that identifies those inmates who qualify for special education

Affecting offender levels for non-participation in programs/assignments

Addressing the training workshop areas needed for working with mentally ill inmates. Exploring new techniques and researching new data that addresses this growing population.

Getting to know staff better

Implementation of the System of Incarceration

Nothing listed.

As a reading specialist teaching in a correctional facility I work with a large number of LD and GED students. The biggest change for me is becoming GPED certified.

I have become more flexible in the things I do and the way I do them.

More nursing staff. Resigned infectious disease control nurse due to ethical reasons- became staff nurse

More use of computers

Needed to increase out-put due to large increase in work-load

Because of understaffing and increased workload quality has be compromised. Accuracy is at a low point. Wages & moral has reached all time low!!

None

I cannot think of an important change in what I do

Utilization of computers in teaching reading, etc.

A view I see reflected more and more is that these are human beings with specific needs and we are being permitted to use compassion in our care. We are not punishing them.

To start a life skills class one day a week

Accepted a new position where I have much bigger responsibility. Went from supervising a small number of staff to supervising several. May most important change was to delegate and follow-up! Let go of controlling attitude.

I have changed my way of teaching the GED classes from medium to maximum do (due) to job reassignment

Increased # of written prescriptions by physicians. Increased # of drugs added to formulary.

Non-medical personnel are making critical decisions about the medical/mental health care of inmate/patients

Facility changing from medium, security to low maximum security to include policy changes and physical plant changes in order to be max.

Practicing more in line with national standards about practicing medicine in correctional setting.

How to interact with people

Seeing the big picture

Giving individualized instruction to meet students' needs

My job is doing quality improvement in medical services- change is all we know!

Greater use of technology

An increase in workload

Supervisory techniques, methods and strategies

Faster pace- prioritize more

Nothing listed

Promoted from warden's asst. to Deputy Warden. Have had to develop supervisory skills quick. I am much younger than most of the people that report to me.

Learning about the different learning styles. Also learning about the LD learner

8 hr classes increased to 12 hr classes

I changed positions- I now teach guys that are under 21. I believe I can make a bigger difference in their lives. My teaching and discipline styles have also changed to adapt to these young students.

Change in admin duties to include different security level of offenders.

Going from a community based health care setting to the Department of Corrections setting. Dealing with policies of corrections vs. public health care

The most significant change in the last two years is moving from high-med yard to the min bldg.

Nothing listed.

New paradigm in teaching fractions (my own development to give success in the first two hours) cyclical program moves students at least 1 year in 3 mo. Training 1-10 hour days, 4 days per week

Increased use of technology

Re-write curriculum

Change in the manner in which inmates are assigned to jobs and housing areas

1) Less autonomy 2) less ability to be creative

Nothing listed

While being a Title I teacher, I was promoted to lead teacher. Allocating time to get both jobs done.

Adapting to and including the ABETS program to our facility

Biggest accomplishment in past 2 years=priority-buy more paint & furniture. More and more and more security and less and less emphasis on programs. Effective programs cam alleviate violence in facilities e.g. inmates killing/hurting staff. Inmates hurting each other and not protecting the people by sending inmates home more violent than when they came to DOC.

Less time is spent working with inmates and more time is spent with determining what problems they have.

Promotion to unclassified level

Taking over as acting dept. head

I now collect and analyze my data for accuracy. Prior to now, action was initiated first.

Using the GED 200 system computer

Brought about due to policy changes in the agency and court order settlement

Nothing listed

Number of inmates incarcerated

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Management of the inmate population and mission of the facility

I just started working in corrections - previously worked in hospitals so the method of care is very different than what I am accustomed to.

Paperwork

My practice has changed from doing therapy with early adolescent offenders in a private hospital to DOC-OSP where most of the work is crisis management.

Increased staffing, better equipment, doctors that care

See emergency patients ASAP instead of scheduling appointments several days ahead.

Did not complete 1st page of the survey questions.

Going from an 8-hr day to a 10-hr day

Field file audits- % ridiculous and takes from other needed areas. Monitoring community packets into return response & putting in % now decreasing

From wearing professional dress to uniforms.

To become more active in Correctional Education Assoc.

Enforcing policy and addressing personnel issues that had not previously been addressed. Hold all staff accountable for their actions or inaction. Improve quality of work performance.

The facility had in cell counts for inmates. Last year it was changed to a freeze count twice a day, at their job assignment.

Have more help where I work. That way I can do a better job

No Change

In the last two years I transferred from Correctional Officer to Correctional Teacher. The two major influences were 1) money 2) to get the humane side of corrections

Listening more to inmates as they have more and more opportunity/privileges taken away. Counseling more to reduce anger.

More reporting and involvement at the higher administrative level coupled with less staff at the lower and higher levels.

The lawsuit forced the administration to recognize the importance of dental/medical care and the need to fund it so it could function properly. This forced changes that we had been asking for years.

None

System dictated.

Standardization in the delivery of services to correctional clients.

When community corrections merged with Probation and parole, the change eliminated the position of superintendent. As the asst. supt. I was promoted to Asst. District Supervisor. And in charge of the correctional center.

Toured the facility more. Spend less time in office.

Added excessive paperwork taking time away from clinic/patient care.

The biggest impact is the increase in micro management employed by management immediately followed by an increase in staff discipline.

More management training on monitoring/delegation and use of computers

Says "None"

Increasing efficiency and efficiency through organization

Less Likely to "knee jerk" diagnosis and more interested in helping patient get back to functional status prior to illness/injury

Recognizing game playing versus truth in inmates.

The constant changes are difficult explaining to inmates reasons for system changes.

During the past year I have changed from supervising 6 employees to approximately 100. As a leader in the department we must take care of our staff. This has been the biggest change- the task of being a role model for others to follow

I order to complete the amount of paperwork required I have to slide on the teaching duty. This is not a change I approve of. My first priority should be teaching.

Volume and severity of dysfunction of the population - priority are less individual therapy, more crisis intervention.

I don't trust people much

Change in assigning of caseloads

Because of increased inmate population and no corresponding increase in human or material resources I am currently able to provide emergency treatment only

I've had to detail duties to the staff I supervise. It got to the point that they wanted me to take care of them and then they wanted to cut my throat.

The direction of professionalism of medical.

Became a supervisor

Coming to JLCC to treat sex offenders

More aware of inmates and more cautious.

Writes "none"

I'm changing continually: my interviewing techniques, assessment endeavors, group processes. It would be difficult to pick the most important.

Writing more complete records. More systematic follow-up of medical problems.

More decisions placed on systemic (corporate) decisions and less decisions made on site.

Nothing listed

Better salary- higher quality staff

Implementing the new System of Incarceration.

Accepting the job 4/1/2000,working in an agency with the leg. Is much different than previous work. In work- changes went from doing the work to delegating.

Change is facility mission - getting staff to recognize we have a different population & requires change in how we manage inmates & operate.

More specific guidance on patient management for sick call & chronic clinic. More requirements.

Developing a GED math curriculum suited for the inmate population was the most significant.

After attending Special Ed training, I have tried to put into practice many of the strategies learned there- mainly to enable me to become a more effective teacher to those who are struggling to learn.

Providing care to 1200+ inmates under scrutiny of the courts with limited staff numbers.

Lab draw location changed from A&R to medical unit.

Increase in psychotherapy

Supervising inmates

Cannot describe with anonymity.

Technical areas providing computers where needed, installing cameras for security staff, allowing staff to submit ideas on changes that will enhance the facility.

Move from community health care standards to national health care standards.

I'm more careful about what I share with the boss- since she took over as the leader. I don't trust her. She rose to position via political worming.

Developing the concept that would address the need for trained/developed leaders for all levels of the agency.

Internet and E-mail

Increased "admin" and problem resolution instead of direct service

Payroll processing paying overtime and holiday pay from timesheets.

Learning to use technology as a means of improving efficiency in the workplace. Only in the last two years did I have access to a computer at work and learn how to use word/WordPerfect to generate documents.

Director of Nursing- expanded hours to cover two shifts 6:00 am - 10:00 pm. Hiring additional nursing staff to cover clinic hours and interspacing medical services to meet the health care needs of inmate population.

Not having daily contact with inmate population.

Increased use of computer systems for record keeping.

Workload as increased- health problems of inmates have become more serious- skill level has increased.

Greater use of technology

Promotion to upper management. I now have to think and act in a much broader, statewide frame of reference.

Implementing changes in the inmate health care delivery system.

Implement a new program across the agency.

On the surface, the way I communicate with employees. This may seem very inconsequential, but is an extremely significant aspect of the job I do. Learning to deal with difficult individuals, irate people emotionally distressed. Learning to keep my emotions out of the process.

Giving independence and accurate, timely feedback

E-mail

Organizational restructuring

The manner in which I interact with my staff and others in the work environment, learning, hope to grow professionally

Appendix G

Responses to "Events" Causing Change

Describe the event

Promotion to deputy warden

Divorce

Health change

Promoted to interim position in administration

Correctional employees training

Change in population served by my leaving private practice and joining DOC. I had to change to meet the needs of my clients.

Mental health problems- I can no longer be the lifeguard for everybody else's problems. I have to take care of myself first- especially my health. I continue to love my field of work with a true passion.

Promotion

The firing of hi-level personnel

Transition from P&P to facilities

Retired from private practice

Promotion allowed me the opportunity to make necessary changes to improve overall operation.

The physical stress that came with trying to supervise the "one size fits all".

Dept. related litigation and self-improvement through education

Job change due to move and some health change.

Computer automated calendar tracking shared by warden and deputy warden and their staff

After starting to teach chronic care pts at visits, lost 50 lbs myself, applying what I was teaching.

Job promotion & agency expectations

Job promotion and agency expectations

Birth of daughter in 1997

Federal intervention/auditors, attorneys

Health-position upgrade

Family illness

Have more commitment to "go with the flow" and not personalize

Have made the commitment to "go with the flow" and not personalize

More confidence, computer use

The staff I supervise told some lies to my supervisor because they didn't like having to do their job.

I have always worked within the constraints of professionalism however OSP's unit is undergoing a transition toward community standards.

The person I replaced had been here for 30 years and when I took over I created a lot of change for the staff.

Degree

An officer was murdered by an inmate and level of institution went from medium to maximum.

Need to serve

Accepting the position with DOC on 4-1-00

No particular event- just the overall realization that I could be reaching my student differently- allowing them to work more to their potential.

Job change

Health, makes you look at your personal life as well as your professional life on the way you set your priorities and what is important to you, your staff and the facility

Her leadership skills- her voiced attitude that the former boss was to weak and to easy and she wasn't going to be.

The remaining time with the agency prior to retirement.

With my promotion I was able to determine that many agency concerns were not viewed according to my individual perspective.

Promotion

My son became very ill, doctor's recommend we move away from rural setting.

Involvement in Leadership class.

Agency reorganization. Old job eliminated.

Applied for a new job, wanted new experience, change of routine, different responsibilities, better pay.

New law required agency compliance. I was tasked w/implementation of compliance program.

Major surgery; deaths of close friend; treatment on the job. All made me realize that life is very short and it is how we treat one another that counts.

Organizing for child care

Supervisor change

Constant changes in procedure mandated by policy or statute in new records management systems, changing institutional missions, expanded scope of responsibility (multi-instructional)

Lack of GED completions

Promotion

Trying to help DOC affect recidivism

Promotion

Desire to overcome a voluntary demotion and reinvent my life and character.

Put in for promotion approximately 12 times, worked hard & faithful. Always kept my positive attitude. I will not let anyone of anything take that away no matter what! I do voice my opinion & concerns although in a positive manner. I felt I have been punished for it.

Promotion to Sgt. ad am now shift supervisor

Relationship trials and errors

Job promotion. Self-motivation

Marriage- moved out of town. Had to change jobs. Going back to public school.

Desire to work for somebody else.

A life transition

Pts. Complained

Move

Role model

Family, children and significant other made me see that life is short and that you should do the best you can at your job but that family and especially your children are more important. Promotion into upper management made me see the big picture and that we need to provide humane treatment to inmates and have them learn the system better than when they arrived.

Birth of a child

The lawsuit forced the DOC administration to make changes

Federal court evaluation of medical and psychological services provided to correctional clients.

Medical problem (upper respiratory) that restricted my movement.

A change in departmental management styles

Use of computers for monitoring and communications

New job-Increased responsibilities

During a 3-month period, the following occurred in my life_ a divorce, a job promotion, new residence and new engagement. Only by the grace of God was I able to deal with these issues.

Lack of respect from administrators outside of our department. They bask in the production from our department but do not support us. This has made a big change in my attitude toward my job.

Threat of losing job if we have an escape

Health problems and divorce made me more concerned about job security.

Belief that (special education) students with disabilities are at risk for incarceration. Disabilities are a component of incarceration is not fully addressed.

Career change due to inept public school administration leading to health concerns.

TB Control was insufficient- Job title without the teeth as TB control officer

The great increase in workload with not enough personnel

Increased regulation, decrease staff increase workload. Attitude is at a low ebb!

A very caring new health administrator who has much of my own philosophy.

Promotion

Divorce / Got rid of the Bitch- cost me a bunch of money

Told by higher headquarters. No input by staff level workers

Facility change from medium to low maximum security

Events at OSP where 2 doctors were fired and shake=up in medical unit and central office of medical services in 1998 after death of inmate at OSP due to heat illness. Dr. Grifinger and his report released.

Promotion

Work assignment at a highest level of organization responsibility

Job change to quality improvement

Severe health problem, changed supervisors and went from urban to rural work location, husband began working same hours

Health change and supervisors direction.

Job change

Having to deal with bias on the part of minority co-workers

Promotion

When one particular style doesn't help a student

I just wanted to make a difference and I felt that the young men could better benefit from my teaching style and enthusiasm. I relate well with them.

Dissatisfied with current job

Students were showing large degree of stress and frustration to meet the needs.

Appendix H

Responses to "Other" for Material Resources Used

Others

idno	Describe other materials used
1	NIC Training
2	family/friends
3	
4	trng seminars
5	workshops
6	Consultation with other DOC psychologists
7	
8	
9	spiritual materials
10	
11	
12	
13	
14	
15	
16	Experience learned and gained over many years if working with people. Developing techniques and time management skills. Also, knowledge of all the areas involved allows you the ability to make decisions based on experience and need.
17	People
18	Inservices and workshops
19	
20	
21	
22	
23	
24	
25	
26	
27	Focus Groups
28	
29	
30	
31	
32	employee
33	
34	
35	
36	
37	
38	Contiguous States
39	
40	Consultation w/outside professionals.
41	
42	networking

idno	describe other materials used
43	
44	Consultants
45	
46	Networking College
47	
48	OSHD/TB Division
49	
50	
51	Indicates that the above resources are "Not Available."
52	
53	
54	Literacy lab
55	My own material that included all of the above
56	
57	
58	Trusted a damn lawyer who sold me down the river of no return
59	
60	directives
61	
62	Work experience at McAlister when working here on assignment
63	
64	OJT/Professional advice from "respected" leaders.
65	
66	
67	
68	Supervisor's direction. Workforece on employee needs.
69	Peers
70	
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79	Testing and Results
80	
81	Concepts from pre-GED tests
82	
83	
84	
85	
86	Networking comp. Program
87	professional meeting
88	Lecture
89	
90	
91	
92	

idno	describe other materials used
93	
94	
95	Policy
96	
97	
98	
99	
100	
101	
102	Mentors
103	
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107	
108	
109	New desire to ascertain what other staff's responsibilities are
110	
111	
112	job placement
113	3
114	
115	
116	
117	
118	
119	
120	
121	
122	Training
123	
124	
125	
126	Colleagues
127	Confgerences
128	
129	Lectures
130	
131	Observation of other peer, professionals
132	
133	Indicates that "Spititual tapes help me in every aspect of my life_family, home, business, change.
134	
135	
136	
137	
138	
139	
140	
141	

idno	describe other materials used
142	
143	
144	
145	
146	
147	
148	
149	
150	
151	
152	
153	
154	
155	1
156	Experience
157	Education
158	Staff input and meetings
159	
160	Professionals
161	
162	
163	
164	Workshops
165	
166	
167	
168	
169	
170	Training seminars
171	Policy/Procedures
172	
173	
174	Lecture and training
175	
176	
177	
178	personal experience
179	Networking with other states
180	Classes
181	
182	
183	Staff communication and networking
184	
185	
186	
187	
188	
189	Peers
190	Consultatnts
191	Interviewing practioners.

Appendix I

Responses to "Other" for Human Resources Used

Others

idno	Describe other assistance
1	
2	
3	
4	
5	inmates
6	4
7	
8	
9	prof. Counsellors
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	0
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	Peers
33	0
34	
35	
36	
37	
38	
39	
40	Professional consultation (also indicated that above friends were in the same profession)
41	
42	
43	
44	
45	

idno	Describe other assistance
46	Professional organizations-in monetary support.
47	
48	
49	
50	
51	Indicates "No time"
52	
53	
54	
55	
56	
57	
58	Her fat ass
59	
60	
61	
62	
63	
64	
65	
66	
67	
68	supervision
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	students
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	

idno	Describe other assistance
96	
97	
98	
99	
100	
101	
102	God
103	
104	
105	
106	
107	
108	
109	
110	
111	
112	
113	
114	
115	
116	
117	
118	
119	
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127	
128	
129	
130	
131	
132	
133	
134	
135	
136	
137	
138	
139	
140	
141	
142	Vo-Tech
143	
144	
145	

idno	Describe other assistance
146	
147	
148	
149	
150	
151	
152	
153	
154	
155	
156	
157	
158	
159	
160	
161	
162	
163	
164	
165	
166	
167	
168	
169	
170	My students
171	
172	
173	
174	
175	
176	
177	
178	
179	
180	
181	
182	0
183	
184	
185	
186	Consultants
187	
188	
189	Peers
190	
191	Outside professionals

Appendix J

Responses to "Other" for Training Resources Used

Others

idno	Describe outside training
1	
2	
3	
4	
5	
6	commment: "Only because I am so new to DOC"
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	OFMQ
19	
20	CME Approved Program
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	

idno	Describe outside training
47	
48	
49	
50	
51	Must pay for personnally and do on my own time!!
52	
53	
54	
55	
56	
57	
58	The judge said she got the gold mine and I got the shaft
59	
60	
61	
62	
63	
64	1
65	
66	
67	
68	self and supervision direction (rated 3)
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	
96	

idno	Describe outside training
97	
98	
99	
100	
101	
102	
103	
104	
105	
106	
107	
108	
109	
110	
111	OPM
112	State Educ Training
113	
114	
115	
116	
117	
118	
119	
120	
121	
122	4
123	
124	
125	
126	
127	
128	
129	
130	
131	
132	
133	
134	
135	
136	
137	
138	
139	
140	
141	
142	Vo-Tech
143	
144	
145	
146	

idno	Describe outside training
147	
148	
149	
150	
151	
152	
153	
154	
155	
156	
157	
158	
159	
160	Mental health training programs
161	
162	
163	
164	
165	
166	
167	3
168	
169	
170	
171	
172	
173	
174	
175	
176	
177	
178	
179	
180	Vo-Tech
181	
182	
183	
184	
185	
186	
187	
188	
189	
190	NCCHC
191	

Appendix K

ANOVA'S for Material Resources Used

1. By Gender
2. By Race
3. By Education Level
4. By Job Assignment
5. By Job Location
6. By Area of Practice

ONE WAY ANOVA MATERIAL WITH:

ANOVA MATSCORE — GENDER

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	146.167	1	146.167	4.853	.029
Between Groups	146.167	1	146.167	4.853	.029
Within Groups	5360.694	178	30.116		
Within Groups	5360.694	178	30.116		
Total	5506.861	179			
Total	5506.861	179			

ANOVA MATSCORE — RACE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	120.460	2	60.230	1.962	.144
Between Groups	120.460	2	60.230	1.962	.144
Within Groups	5371.478	175	30.694		
Within Groups	5371.478	175	30.694		
Total	5491.938	177			
Total	5491.938	177			

ANOVA MATSCORE — EDUCATION

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	72.758	5	14.552	.491	.782
Between Groups	72.758	5	14.552	.491	.782
Within Groups	4767.961	161	29.615		
Within Groups	4767.961	161	29.615		
Total	4840.719	166			
Total	4840.719	166			

ANOVA MATSCORE — JOB ASSIGNMENT

	Sum of Squares	df	Mean Square	F	Sig.

Between Groups	44.449	4	11.112	.356	.840
Between Groups	44.449	4	11.112	.356	.840
Within Groups	5462.412	175	31.214		
Within Groups	5462.412	175	31.214		
Total	5506.861	179			
Total	5506.861	179			

ANOVA MATSCORE WORK SETTING

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.984	2	14.992	.485	.617
Between Groups	29.984	2	14.992	.485	.617
Within Groups	5476.877	177	30.943		
Within Groups	5476.877	177	30.943		
Total	5506.861	179			
Total	5506.861	179			

ANOVA MATSCORE AREA OF PRACTICE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	263.032	1	263.032	8.929	.003
Between Groups	263.032	1	263.032	8.929	.003
Within Groups	5243.829	178	29.460		
Within Groups	5243.829	178	29.460		
Total	5506.861	179			
Total	5506.861	179			

Appendix L

ANOVA'S for Human Resources Used

1. By Gender
2. By Race
3. By Education Level
4. By Job Assignment
5. By Job Location
6. By Area of Practice

ONE WAY ANOVA MATERIAL WITH :

ANOVA STFSCORE — GENDER

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	83.330	1	83.330	2.225	.138
Between Groups	83.330	1	83.330	2.225	.138
Within Groups	6664.981	178	37.444		
Within Groups	6664.981	178	37.444		
Total	6748.311	179			
Total	6748.311	179			

ANOVA STFSCORE — RACE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	125.661	2	62.831	1.673	.191
Between Groups	125.661	2	62.831	1.673	.191
Within Groups	6572.367	175	37.556		
Within Groups	6572.367	175	37.556		
Total	6698.028	177			
Total	6698.028	177			

ANOVA STFSCORE — EDUCATION

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	270.373	5	54.075	1.391	.230
Between Groups	270.373	5	54.075	1.391	.230
Within Groups	6258.765	161	38.874		
Within Groups	6258.765	161	38.874		
Total	6529.138	166			
Total	6529.138	166			

ANOVA STFSCORE — JOB ASSIGNMENT

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	236.134	4	59.034	1.586	.180
Within	6512.177	175	37.212		

Groups		
Total	6748.311	179
Total	6748.311	179

ANOVA WORK SETTTING
STFSCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	234.764	2	117.382	3.190	.044
Between Groups	234.764	2	117.382	3.190	.044
Within Groups	6513.547	177	36.800		
Within Groups	6513.547	177	36.800		
Total	6748.311	179			
Total	6748.311	179			

ANOVA AREA OF PRACTICE
STFSCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	692.152	1	692.152	20.343	.000
Between Groups	692.152	1	692.152	20.343	.000
Within Groups	6056.159	178	34.023		
Within Groups	6056.159	178	34.023		
Total	6748.311	179			
Total	6748.311	179			

Appendix M

ANOVA'S for Training Resources Used

1. By Gender
2. By Race
3. By Education Level
4. By Job Assignment
5. By Job Location
6. By Area of Practice

ONE WAY ANOVA OF USE OF HUMAN RESOURCES WITH:

ANOVA GENDER
TRNSCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	58.361	1	58.361	2.882	.091
Between Groups	58.361	1	58.361	2.882	.091
Within Groups	3604.750	178	20.251		
Within Groups	3604.750	178	20.251		
Total	3663.111	179			
Total	3663.111	179			

ANOVA RACE
TRNSCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	115.273	2	57.636	2.870	.059
Between Groups	115.273	2	57.636	2.870	.059
Within Groups	3514.233	175	20.081		
Within Groups	3514.233	175	20.081		
Total	3629.506	177			
Total	3629.506	177			

ANOVA EDUCATION
TRNSCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	148.951	5	29.790	1.450	.209
Between Groups	148.951	5	29.790	1.450	.209
Within Groups	3307.109	161	20.541		
Within Groups	3307.109	161	20.541		
Total	3456.060	166			
Total	3456.060	166			

ANOVA JOB ASSIGNMENT
TRNSCORE

	Sum of Squares	df	Mean Square	F	Sig.

Between Groups	88.245	4	22.061	1.080	.368
Between Groups	88.245	4	22.061	1.080	.368
Within Groups	3574.866	175	20.428		
Within Groups	3574.866	175	20.428		
Total	3663.111	179			
Total	3663.111	179			

ANOVA TRNSCORE WORK SETTING

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	120.018	2	60.009	2.998	.052
Between Groups	120.018	2	60.009	2.998	.052
Within Groups	3543.093	177	20.017		
Within Groups	3543.093	177	20.017		
Total	3663.111	179			
Total	3663.111	179			

ANOVA TRNSCORE AREA OF PRACTICE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	70.393	1	70.393	3.488	.063
Between Groups	70.393	1	70.393	3.488	.063
Within Groups	3592.718	178	20.184		
Within Groups	3592.718	178	20.184		
Total	3663.111	179			
Total	3663.111	179			

Appendix N

Correlation Matrix for Size And Complexity of Change With the Utilization of Material, Human, and Training Resources

Correlations

Correlations

		LARGE	COMPLEX	MATSCORE	JOURNALS	VIDEO	AUDIO	TEXTS	INTERNET	OTHER
LARGE	Pearson Correlation	1.000	.493**	.084	.064	-.061	-.004	.061	.023	.196*
	Sig. (2-tailed)	.	.000	.274	.404	.423	.963	.428	.712	.010
	N	172	171	172	172	172	172	172	172	172
COMPLEX	Pearson Correlation	**	1.000	.261**	.144	.124	.209**	.199**	.140	.241**
	Sig. (2-tailed)		.	.001	.060	.103	.006	.009	.067	.001
	N		172	172	172	172	172	172	172	172
MATSCORE	Pearson Correlation		**	1.000	.796**	.723**	.671**	.800**	.648**	.477**
	Sig. (2-tailed)			.	.000	.000	.000	.000	.000	.000
	N				130	130	130	130	130	130
JOURNALS	Pearson Correlation			**	1.000	.511**	.418**	.673**	.500**	.206**
	Sig. (2-tailed)				.	.000	.000	.000	.000	.007
	N				130	130	130	130	130	130
VIDEO	Pearson Correlation			**	**	1.000	.617**	.529**	.300**	.172*
	Sig. (2-tailed)					.	.000	.000	.000	.021
	N					130	130	130	130	130
AUDIO	Pearson Correlation		**	**	**	**	1.000	.477**	.293**	.140
	Sig. (2-tailed)						.	.000	.000	.060
	N						130	130	130	130
TEXTS	Pearson Correlation		**	**	**	**	**	1.000	.494**	.197
	Sig. (2-tailed)							.	.000	.067
	N							130	130	130
INTERNET	Pearson Correlation			**	**	**	**	**	1.000	.084
	Sig. (2-tailed)								.	.263
	N								130	130
OTHER	Pearson Correlation	a	**	**	**	a				1.000
	Sig. (2-tailed)									.
	N									130

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

Correlations

		LARGE	COMPLEX	STFSCORE	STAFFFAC	STAFFOUT	STAFFOU1	STAFFUNI	FRIENDS	SPOUSEFA	OTHERASS
LARGE	Pearson Correlation	1.000	.498**	.084	.025	.100	.079	.005	.033	.044	.104
	Sig. (2-tailed)	.	.000	.273	.742	.193	.320	.948	.647	.563	.173
	N	172	171	172	172	172	172	172	172	172	172
COMPLEX	Pearson Correlation	**	1.000	.093	.033	.075	.136	.114	.066	-.036	.022
	Sig. (2-tailed)		.	.223	.621	.326	.077	.137	.397	.637	.777
	N		172	172	172	172	172	172	172	172	172
STFSCORE	Pearson Correlation			1.000	.700**	.695**	.740**	.635**	.392**	.646**	.301**
	Sig. (2-tailed)			.	.000	.000	.000	.000	.000	.000	.000
	N			130	130	130	130	130	130	130	130
STAFFFAC	Pearson Correlation			**	1.000	.447**	.393**	.725**	.277**	.210**	-.017
	Sig. (2-tailed)				.	.000	.000	.000	.000	.006	.321
	N				130	130	130	130	130	130	130
STAFFOUT	Pearson Correlation			**	**	1.000	.396**	.353**	.336**	.241**	.116
	Sig. (2-tailed)					.	.000	.000	.000	.001	.142
	N					130	130	130	130	130	130
STAFFOU1	Pearson Correlation			**	**	**	1.000	.345**	.413**	.367**	.156*
	Sig. (2-tailed)						.	.000	.000	.000	.034
	N						130	130	130	130	130
STAFFUNI	Pearson Correlation			**	**	**	**	1.000	.223**	.270**	.025
	Sig. (2-tailed)							.	.000	.000	.725
	N							130	130	130	130
FRIENDS	Pearson Correlation			**	**	**	**	**	1.000	.520**	.156*
	Sig. (2-tailed)								.	.000	.037
	N								130	130	130
SPOUSEFA	Pearson Correlation			**	**	**	**	**	**	1.000	.180*
	Sig. (2-tailed)									.	.016
	N									130	130
OTHERASS	Pearson Correlation			**			*		*	*	1.000
	Sig. (2-tailed)										.
	N										130

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

Correlations

		LARGE	COMPLEX	TRNSCORE	DEPTTRAI	TRAINING	OUTSIDET	NATIONTR	OTHERTRA
LARGE	Pearson Correlation	1.000	.496**	.026	.132	-.029	.105	.073	.075
	Sig. (2-tailed)	.	.000	.211	.084	.710	.169	.343	.330
	N	172	171	172	172	172	172	172	172
COMPLEX	Pearson Correlation	.496**	1.000	.158*	.158*	-.003	.160*	.158*	.080
	Sig. (2-tailed)	.000	.	.042	.042	.972	.035	.041	.295
	N	171	172	172	172	172	172	172	172
TRNSCORE	Pearson Correlation	.026	.158*	1.000	.804**	.799**	.772**	.736**	.154*
	Sig. (2-tailed)	.211	.042	.	.000	.000	.000	.000	.039
	N	172	172	172	172	172	172	172	172
DEPTTRAI	Pearson Correlation	.132	.158*	.804**	1.000	.808**	.444**	.341**	.122
	Sig. (2-tailed)	.084	.042	.000	.	.000	.000	.000	.193
	N	172	172	172	172	172	172	172	172
TRAINING	Pearson Correlation	-.029	-.003	.799**	.808**	1.000	.439**	.305**	.097
	Sig. (2-tailed)	.710	.972	.000	.000	.	.000	.000	.204
	N	172	172	172	172	172	172	172	172
OUTSIDET	Pearson Correlation	.105	.160*	.772**	.444**	.439**	1.000	.497**	.049
	Sig. (2-tailed)	.169	.035	.000	.000	.000	.	.000	.512
	N	172	172	172	172	172	172	172	172
NATIONTR	Pearson Correlation	.073	.158*	.736**	.341**	.305**	.497**	1.000	-.047
	Sig. (2-tailed)	.343	.041	.000	.000	.000	.000	.	.529
	N	172	172	172	172	172	172	172	172
OTHERTRA	Pearson Correlation	.075	.080	.154*	.122	.097	.049	-.047	1.000
	Sig. (2-tailed)	.330	.295	.039	.193	.204	.512	.529	.
	N	172	172	172	172	172	172	172	172

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).