

ADVANTAGES AND DISADVANTAGES OF STRAIGHT-LINED
AND NONSTRAIGHT-LINED ORGANIZATIONS AT THE
AIRWAY FACILITIES TRAINING DIVISION OF THE
FEDERAL AVIATION ADMINISTRATION
ACADEMY

By

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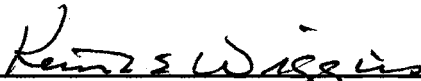
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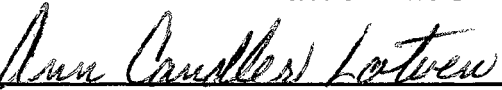
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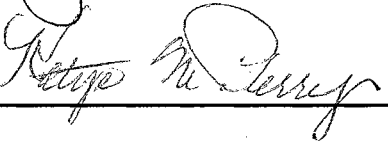
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NOMENCLATURE

ABC	Activity Base Costing
AF	Federal Aviation Administration Airway Facilities
AFZ	Airway Facilities Training Division
ARC	Associate Administrator for Center and Region
ADTS	Activity Data Tracking System
ATS	Air Traffic Services
CAS	Cost Accounting System
CTTMS	Centralized Training Travel Management System
DMT	Division Management Team
DAFIS	Data Accounting Financial Information System
EI	Employees' Involvement
FAA	Federal Aviation Administration
MMAC	Mike Monroney Aeronautical Center
NPR	National Performance Review

CHAPTER I

INTRODUCTION

Many terms can be used to describe the organizational structures of the Federal Aviation Administration (FAA) Airway Facilities Divisions. The broadest terms are centralization and decentralization, which means the same as straight-lined and nonstraight-lined in the Federal Aviation Administration organizations. Centralization is defined as a condition in which there is little delegation. Decentralization is defined as a condition in which a considerable amount of delegation occurs and thus, a considerable vesting of responsibility and authority in the hands of subordinates (Hodge & Anthony, 1991).

In centralized organizations, power and decision points are few. In decentralized organizations, authority and decision making are spread throughout the organization, and authority is generally delegated to the smallest practicable units. Centralization of authority can usually expedite decision making because fewer people are involved. Decentralization involves more people and takes more time but may improve organizational morale by giving more employees the opportunity to be involved in the decision making (Goldhaber, 1990).

Decentralization often results in position cuts, especially in staff at the corporate level as managers in the divisions and field offices are given more authority to make decisions. Equating authority with task completion is similar to the concept that authority

equals responsibility. This concept holds that the level of the organization responsible for completion of a set of tasks should have enough authority to make decisions to ensure task completion (Hodge & Anthony, 1991).

Since 1988, the FAA has utilized the process of centralizing and decentralizing functions and referred to them as straight-lined and nonstraight-lined. For simplicity, straight-line is defined as being centralization, and nonstraight-line is defined as being decentralization.

The FAA is a very large and unique organization within the Department of Transportation (DOT). The main purpose of the FAA is to promote air safety. The Mike Monroney Aeronautical Center (MMAC) FAA Academy, located in Oklahoma City, Oklahoma, is where the Airway Facilities (AF) Division resides. The AF training division provides technical and specialized operational training and related support services to the customers. The primary customer focus is personnel who are assigned responsibility for continued reliability of the National Airspace System, such as electronics technicians, engineers, computer programmers, and environmental specialists.

A need exists to minimize the amount of time it takes to accomplish various tasks in reference to technical training. Within the FAA Academy, seven divisions exist, of which five are line organizations and the other two are support organizations. Only one of the five line organizations, the security division is straight-lined or centralized to its headquarters office counterpart in Washington, D.C. All of the line organizations have the primary responsibility of delivering technical training to the respective FAA personnel around the nation to ensure a safe and secure National Airspace System. This study will

attempt to describe the advantages and disadvantages of straight-lined and nonstraight-lined organizations at the Mike Monroney Aeronautical Center FAA Academy.

Problem Statement

Many of the FAA's managers believe that a need exists for a descriptive study of the advantages and disadvantages of straight-lined and nonstraight-lined organizations. Managers need information to assist in analyzing the present organizational structure and to make sound decisions about which process is better. In a personal interview in 1998, Dr. H. C. "Mac" McClure, former FAA Center and Regional Director, stated that the first thing Congress does when they feel they are losing control is make the agency director have everyone report to him or her. As a consequence, the agency director tends to straight-line rather than nonstraight-line. In the present structure, too many managers exist. Technical training roles and responsibilities of the service organization at the FAA Headquarters and the AF Division at the FAA Academy are not clearly defined. Tasks are not always easily accomplished; they lack efficiency, and the decision-making process is too slow. Also, the perception of many AF people, both in the field and at the FAA Academy, is the people working in the service organizations in headquarters believe that by straight-lining they can control the training outcomes and improve them.

Another perception of AF people at the FAA Academy is that actual managers do not concern themselves enough with agency business. The line organizations within the Academy have enjoyed the amount of freedom and empowerment given by the Academy, the Mike Monroney Aeronautical Center, and the FAA Associate Administrator for Center and Regional Requirements (ARC). At times, the Academy line organizations sought more

support from upper management on training issues and concerns. In the present structure, the AF Division at the Academy reports to the FAA Academy Program Director, who reports to the Director of the Aeronautical Center, who reports to the Associate Administrator for Regional and Center Requirements (ARC), who reports to the Office of the Administrator. The latter two are located at FAA Headquarters in Washington, D.C. (see Figures 1, 2, 3, and 4). Yet, most of the tasks and directions for the AF Division come from the Maintenance Training Division. The problem with the present structure is the Maintenance Training Division at the FAA Headquarters often acts more like the manager than the people who really manage at the Aeronautical Center. The AF Division receives its financial resources or funding from Air Traffic Services (ATS) located in Headquarters, which is confusing to some because the AF Division directly reports to the Program Director of the Academy. The Academy Program Director reports to the Aeronautical Center Director, who reports to the Associate Administrator for Center and Region (ARC). The bottom line is that funding for all the previously named direct reports comes from a different source than the AF Division's funding. This often creates problems for the AF Division because of the confusion around who is really in control. Many believe the entity that supplies the money is the one in control because this is where many of the decisions related to training issues are being made. Furthermore, problems often arise regarding responsibility for allocation of resources and staffing levels.

This study is needed to describe the advantages and disadvantages of straight-lined and nonstraight-lined organizations, thereby producing information to improve processes to make it easier and quicker to accomplish tasks.

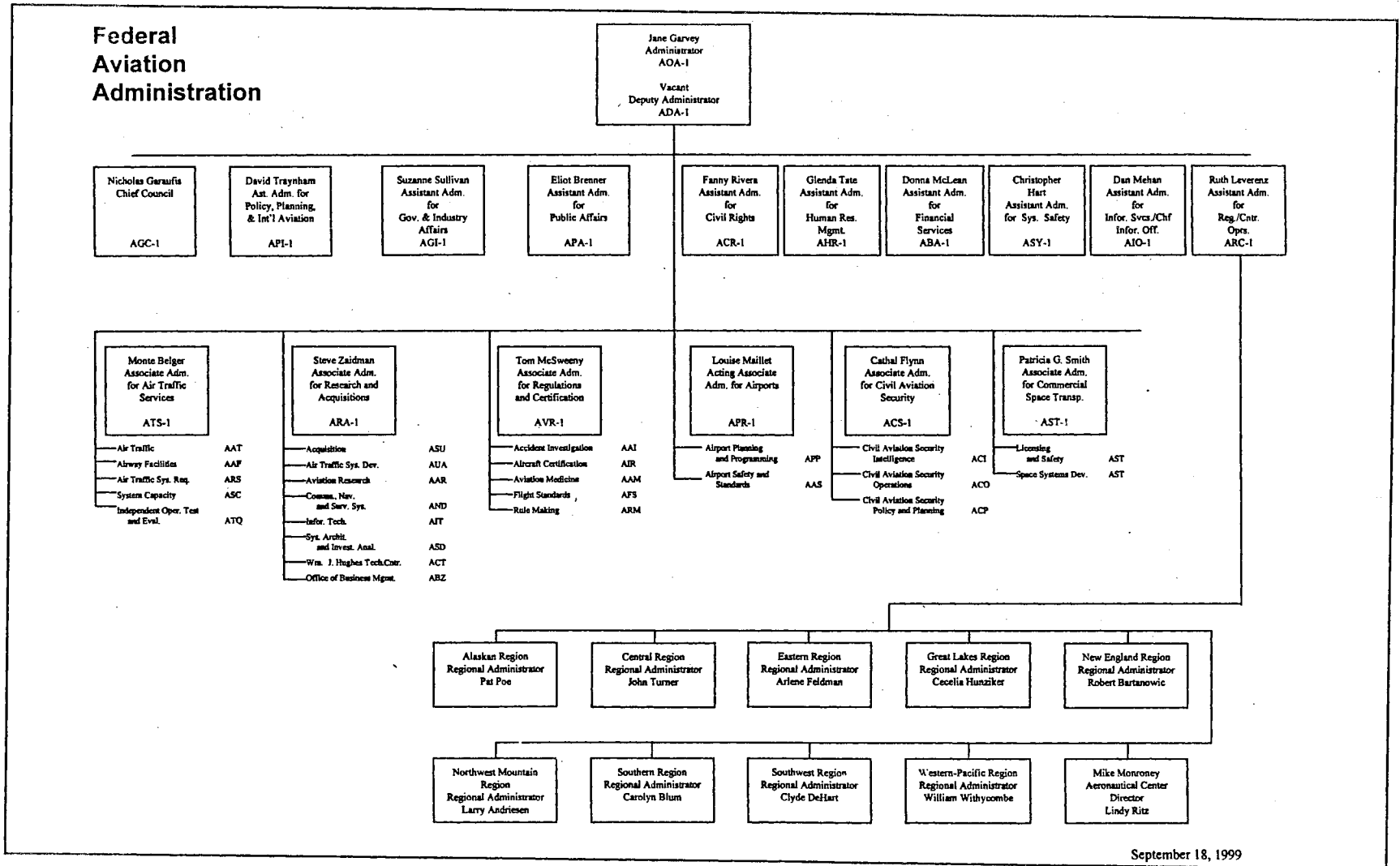


Figure 1. Organizational Chart of the Federal Aviation Administration.

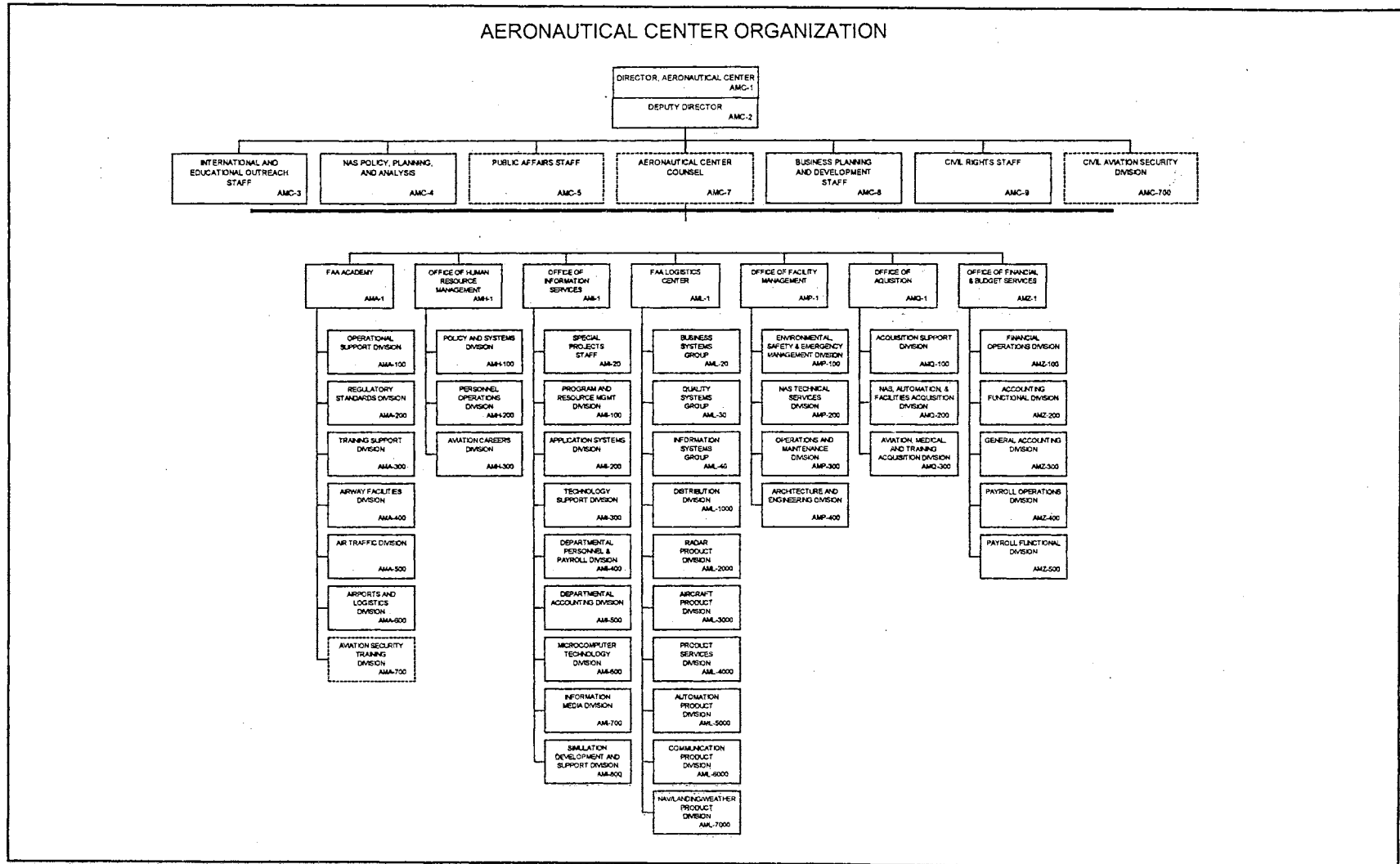


Figure 2. Organizational Chart of the Mike Monroney Aeronautical Center.

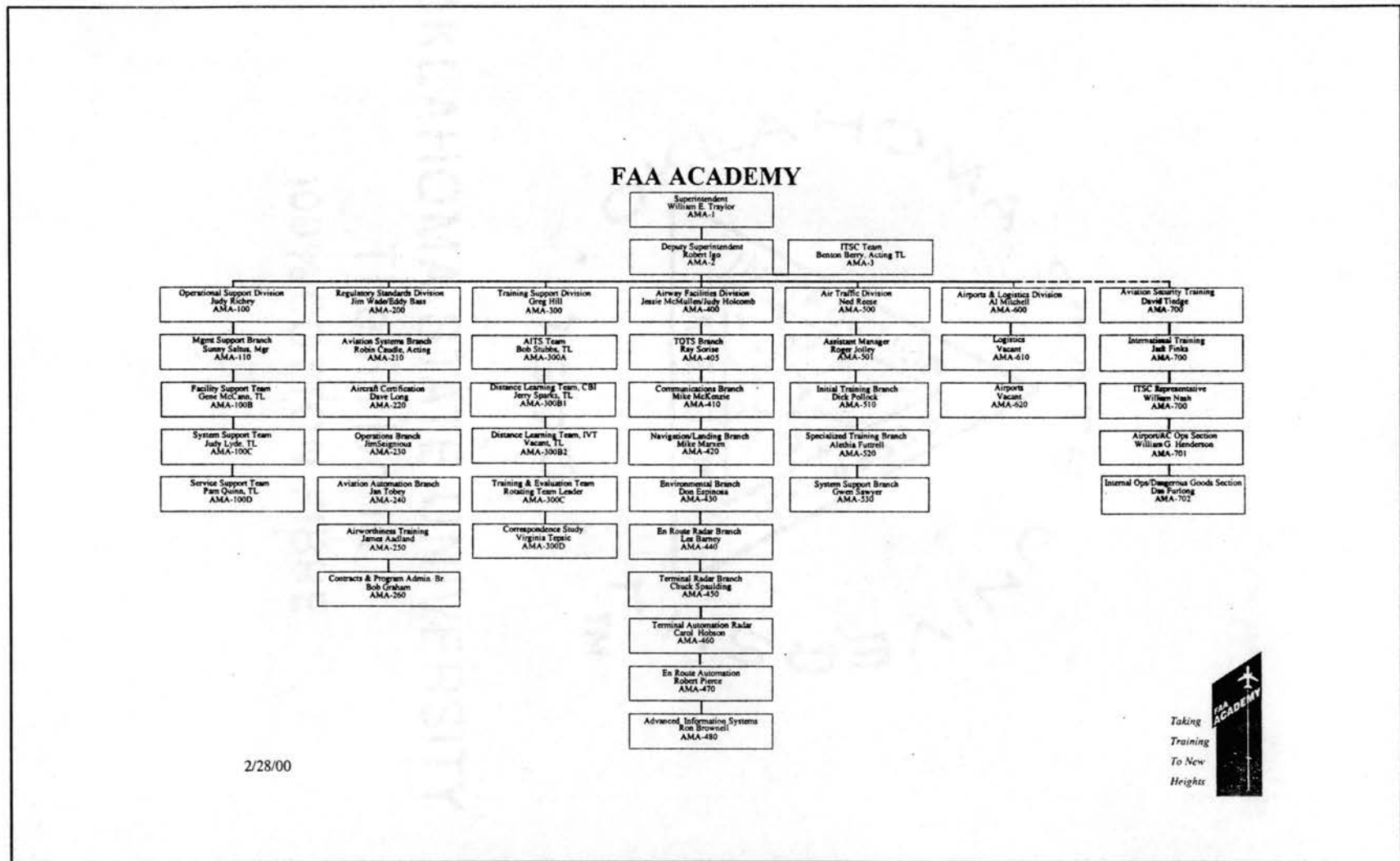
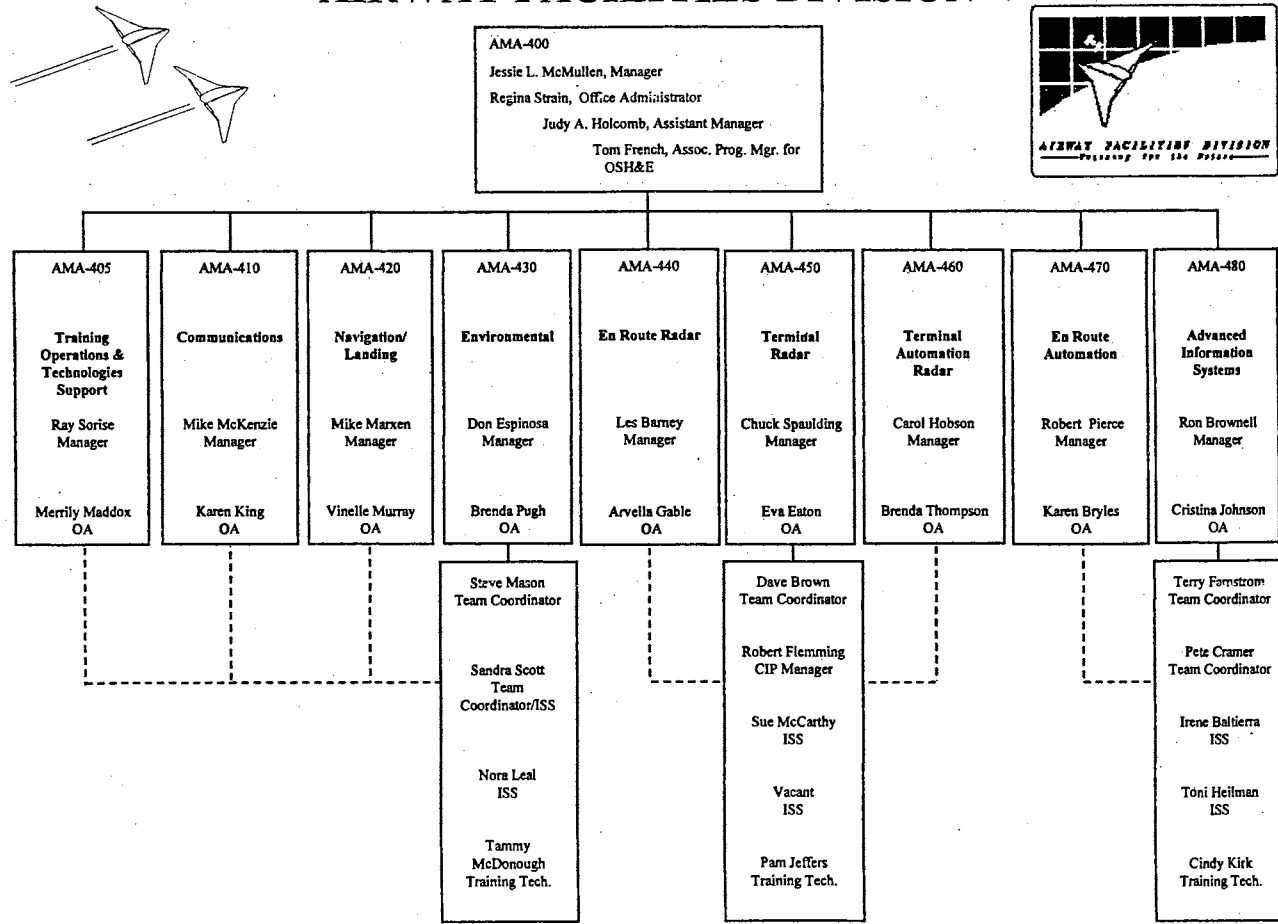


Figure 3. Organizational Chart of the Federal Aviation Administration Academy.

AIRWAY FACILITIES DIVISION



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Figure 4. Organizational Chart of the Airway Facilities Division.

Purpose of the Study

This study describes the advantages and disadvantages of straight-lined and nonstraight-lined organizations in the AF Division at the Mike Monroney Aeronautical Center FAA Academy. This study should assist in making sound decisions about which process is better at the present time. The study was designed to collect data on the advantages and disadvantages of straight-lined and nonstraight-lined organizations. This study was not designed to favor one structure over the other but to provide a better perspective on how to use the structures effectively. Others who read this research will gain an awareness of the advantages and disadvantages of each structure.

Hypotheses

1. If given a choice, most managers in the Airway Facilities Divisions including the AF division at the FAA Academy would prefer a straight-lined organization to a nonstraight-lined organization.
2. Straight-lined organizations would improve efficiency more than non-straight-lined organizations.
3. Most managers would like to see their employees participate in the decision-making process regardless of the organizational structure.

According to Weirsma (2000), the investigator determines if the findings support or do not support the hypothesis. Data are collected and analyzed so the results can be used to confirm or reject the hypothesis. According to the investigator, a level of two thirds

(66.7%) will determine the acceptance and rejection levels. Any result that falls below two thirds (66.7%) will be rejected.

Research Questions

No previous in-depth studies have compared and contrasted straight-lined and nonstraight-lined managerial structures within the FAA Academy. Therefore, to achieve the purpose of this study, the following research questions were raised:

1. How are the training roles and responsibilities in a straight-lined organization and nonstraight-lined organization at the FAA Academy defined?
2. How are tasks accomplished in straight-lined organizations compared to those in nonstraight-lined organizations?
3. Does an organization operate more efficiently if it is straight-lined or nonstraight-lined?
4. Does straight-lining have an impact on work processes, social structure, employee innovations, and communication?

Significance of the Study

Extensive time and human resources have been used to look into the possibility of straight-lining the Airway Facilities Division and the Air-Traffic Division of the FAA Academy. To successfully accomplish the purpose, descriptive research was done on the advantages and disadvantages of straight-lined and nonstraight-lined organizations within

the FAA Academy. This study should provide follow-up information on the attitudes and mind sets to which participants favor one structure over the other.

Data gathered for answers to the research questions may help determine whether roles and responsibilities in a straight-lined organization are better defined than those in a nonstraight-lined organization. The data may help identify whether tasks in a straight-lined organization are more easily accomplished than those in a nonstraight-lined organization. The data gathered may help describe which organizational structure is more efficient. The data can help describe how straight-lining impacts work processes, social structure, employee innovations, and communication. This information can ultimately be used in making informed decisions regarding increased efficiency and decision-making within the FAA Academy AF Division.

Methodology

This study distinguishes between the two processes and emphasizes the advantages and the disadvantages of straight-line and nonstraight-line organizations within the FAA. Quantitative and qualitative research methodology was used. To achieve the purpose of this study, interviews were conducted with FAA managers from both straight-line and nonstraight-line organizations in the field, Headquarters, and the MMAC including the FAA Academy. In addition, a questionnaire consisting of 23 questions was developed and administered to a sample population of the AF managers, at MMAC, the field, and Headquarters.

Assumptions

For the purposes of this study, the following assumptions were made:

1. The Airway Facilities Division and the Air Traffic Division at the FAA Academy are nonstraight-lined.
2. The responses by the participants were honest expressions of their opinions.

Limitations of the Study

The study depended on the voluntary participation of FAA managers in completing survey and interview instruments. Only participants with five years of managerial experience or greater were included in this study. Therefore, the early retirement granted to management in the early nineties is a limitation of this study. The number of straight-lined organizations that exist within the FAA Academy is also a limitation of this study. The survey sampling was limited to Airway Facility managers.

Definition of Terms

For the purpose of this study the following definitions will be used:

Chain of Command - Refers to the levels of the hierarchy (Wagner & Hollenbeck, 1992).

Flat Organization - Refers to the overall shape of an organization. If the span of control of the organization is great, then the overall shape of the organization will be flat (Goldhaber, 1990).

Nonstraight-Lined (Decentralized) - The dispersion of authority and decision making downward and outward through the hierarchy of an organization (Wagner & Hollenbeck, 1992).

Organizational Design - The process of diagnosing the situation that confronts a particular organization and selecting and putting in place the organization structure most appropriate for that situation (Wagner & Hollenbeck, 1992).

Organization Effectiveness - The degree to which an organization is successful in achieving its goals and objectives while at the same time ensuring its continued survival by satisfying the demands of interested parties, such as suppliers and customers (Wagner & Hollenbeck, 1992).

Organization Efficiency - The ratio of outputs produced per unit of inputs consumed, minimizing the raw materials and energy consumed by the production of goods and services. It is usually measured as the ratio of outputs produced per unit of inputs consumed. Thus, efficiency means doing the job right, whereas, effectiveness means doing the right job (Wagner & Hollenbeck, 1992).

Organization Productivity - The amount of goods or services produced by an organization. Higher productivity means more goods or services are produced (Wagner & Hollenbeck, 1992).

Span of Control - Refers to the number of employees a manager can effectively supervise (Goldhaber, 1990).

Straight-Lined (Centralized) - The centralization of authority and decision making at the top of an organization (Wagner & Hollenbeck, 1992).

Structure - Refers to the network of relationships and roles throughout the organization (Goldhaber, 1990).

Tall Organization - Refers to the overall shape of an organization. If the span of control of the organization is small, the organization is considered to be tall (Goldhaber, 1990).

Summary and Organization of the Study

Chapter I described the problem, the purpose, objectives, significance, assumptions and limitations of the study, and the definition of terms. Chapter II presents an in-depth discussion of the review of relevant literature, focusing on managerial experience, centralization versus decentralization, decentralization approaches and dimensions, organization layout, hierarchy and centralization, empowerment, self management, and progress in streamlining management control positions. Chapter III explains the methodology and Chapter IV presents an in-depth discussion of the findings. Chapter V presents a detailed discussion on the conclusion of the study.

CHAPTER II

REVIEW OF LITERATURE

This chapter contains a review of the literature that addresses the following issues:

- Managerial Experience
- Centralization Versus Decentralization
- Decentralization: Approaches and Dimensions
- Organization Layout
- Hierarchy and Centralization
- Empowerment
- Self Management
- Progress in Streamlining Management Control Positions
- Summary

Managerial Experience

Wah (1999) reported older bosses are best. Wah believed youthful leaders are the up-and-coming rulers of the corporate world because of their boundless energy, boldness and willingness to accept change. Most leaders are not equipped to deal with the most critical challenges companies are faced with today and in the future. Senior executives in 13 countries suggest age and experience are more essential than ever before to superior

organizational leadership. Younger senior executives who work in small to midsize companies are more flexible today when it comes to moving around, and they do it often. These executives are usually popular with stock analysts because they stir things up and are ruthless in cutting costs, as pointed out by Wah. But, they are not prepared to lead organizations that are impacted by worsening overproduction and rising expectations of quality.

A balancing act is required in more and more organizations in this day and age. Also, young, radical leaders are very good in markets that are growing. In situations where oversupply occurs, it takes maturity and wisdom to keep a top leadership team in the company together according to Wah (1999).

Wah (1999) contends more mature leaders, by contrast, are able to discuss sore points with key stakeholders and produce resolutions without resentment. In addition, these leaders have enough industry and product experience to establish a brand as the oversupplied markets place an even higher premium on branding.

Canavan (1998) reported Motorola ably faced the challenge of a business environment that was fast changing and posed different and difficult demands. From a small, centralized and narrowly focused electronics firm, Motorola is becoming a decentralized and diversified firm boasting of a portfolio worth around \$27 billion in 1997. The reorganization of the involved three phases, namely, attention to international markets, reconfiguration of management and focus on improved strategy and decision-making.

Canavan (1998) contends that historically, growth in Motorola was centered around the organizational assumption that "small is beautiful." Independent business

units with an ever-broadening portfolio, encouraged profitable growth, and allowed management to exit long-standing business and enter—even create—new industries. The connecting mechanisms in the early days resulted from the direct attention of the CEO, frequent top management meetings, and from Corporate Councils.

Bennis and Townsend (1995), believed the business climate today calls for a new definition of what it takes to make an organization run. With rapidly changing technology, a downsized work force, and an emphasis on acquiring a broad range of skills, leaders today have to be more flexible than ever in their roles. Taking risks in their approach to management is the only choice left for those who want to have an impact on an increasingly global work force.

Conner (1992) pointed out that in an ever-fluctuating world, it is not enough to recognize that you and the way you do business need to change. You must know how to make changes quickly, effectively, economically, and with as little political fallout as possible, or you are bound to fail.

Hampton (1994) stated the free flow of information throughout the organization is important for building effective controls. When the employees understand the vision of the organization and the goals are clearly communicated, the results expected can be accomplished because the employees are more willing to participate. Hampton pointed out that sharing of important information communicates to the employees that management cares. It also communicates the employees are valued in the organization. Hampton stated knowing production is 10-15% behind schedule or customer satisfaction is down 20-25%, is more motivational than just being told to increase production or to be more customer responsive.

Hampton (1994) also stated:

Many organizations are decentralizing information flow and decision making in an effort to eliminate bureaucracy, streamline operations, and speed up communications. Flattening out management levels offers more opportunities for senior management and line workers to interact with each other, enhancing the possibility of a partnership rather than the “we-them” relationships present in many companies. Decentralization also moves the planning and decision-making process further down the line, allowing companies to react quickly to external pressures. Sharing information across division, department, or unit lines can stimulate employees’ competitive and creative juices and increase productivity throughout the organization. Knowing about another area’s successes and failures also results in employees modifying their own behavior either replicating or avoiding, as appropriate, the actions taken elsewhere. (p. 46)

Hornestay (1997) reported that decentralization is the wave of the present. People are more motivated when they feel responsible for the things they produce, and work is completed faster and cheaper with fewer people when it does not get delayed in the chain of command. According to Hornestay (1997), the agency leaders in Washington are held accountable for progress and problems by all sorts of groups. The operating level, no matter how adequate, gets information; and it gets disseminated formally and informally. As in any multiple layer communication system, “noise” is introduced into the message. According to Jones, Bowers, and Fuller (1982), autocratic management discourages accurate, timely upward communication and encourages telling superiors what they are believed to want to hear. In a straight-lined organization fewer intermediary layers exist, which may result in a clearer message. No ideal balance exists between centralization and decentralization; management has a responsibility to make either process or a combination thereof work (Hornestay, 1997).

Hornestay (1997) believed management should not consider either centralization or decentralization as a final process. Room always exists for improvements and

adjustments that need to be done along the way. The ideal situation is to match the approach to the job, and then make sure the job is done well. This approach might be difficult for a manager with many years of experience. Many FAA people who would argue no recent reform will ever take care of the problem, but will surely create many new ones. This type of mind set or attitude is never going to help an organization move forward in the direction it needs to unless these attitudes change to a more proactive one (Hornestay, 1997).

Delegating many of the activities in an agency to field offices may result in improved service to the public, reduced administrative costs, smaller staff requirements, and faster action. Delegation also relieves headquarters from the burden of day-to-day operations and enables it to focus more on necessary functions in headquarters, such as policy formulation and oversight of operations. Decentralization, because of its importance, should be designed and managed to produce the maximum benefit for the people and institutions served by the agency. Otherwise, the efforts will not be successful and may ultimately produce grief often experienced by many (Hornestay, 1997).

Before going forward with decentralization, the FAA AF management must decide which activities can be advantageously decentralized and which cannot. Policy determination can clearly be seen as a headquarters function. Other items that could be considered as headquarters functions are resource allocations, White House and Congressional negotiations, and the monitoring and evaluation of field operations. Payroll preparation and assembly of agency-wide statistical data were determined as operations most effectively carried out in a single unit (Hornestay, 1997).

Hornestay (1997) believed that with operational accountability spelled out, delegation of authority must be clear-cut. Authority should be delegated to the field when policies and standards exist to guide those actions. A new statute may require a centralized administration for a minimum period until the agency has developed and communicated implementation policies, standards, and regulations. Serious missteps by field officials and inequitable treatment of the clients in an agency may result if one fails to provide adequate directions or guidance.

Hornestay (1997) stated that successful decentralization depends on staff and facilities with the qualifications to carry out such a process. With enough people in the field, adequate training and high enough grade levels must exist to make the new responsibilities effective. Field officials must have the rank and status needed to hold their own and interact with headquarters officials and to be effective in working with agency clients, such as state and local officials and business leaders. Because decentralization generally cuts red tape, it often results in a staffing reduction (Hornestay, 1997).

Hornestay (1997) recommended experienced managerial officials lead the design and implementation of the decentralization process. Leaders with career status and leadership ability must be signed up for key roles.

Hornestay (1997) believed no reform will be successful without tremendous involvement of agency leaders and sustained staff support. Allowing employees to participate in the design of this process will enhance their motivation toward change. It will also give them some ownership as well as responsibility for its make-up.

According to Prahalad and Oosterveld (1999), management has gained experience from organizational changes over the past years. Change is more than minimizing costs, re-engineering or increasing profitability. Change is the creation of strategies and management processes. Change should be pushed by innovation, a recent concept of opportunity. Second, change must involve the entire organization. This will ensure a much more effective process by including all employees at every level of the organization. Any modification should be led by top management for the purpose of dramatically influencing the global view of the whole organization and the belief in the opportunities for the firm. For modified ways to be complete, a new and shared vision of opportunity must be considered the only option. Third, change must tolerate deep seated and regular tacit values and beliefs. They often have meaningful control over, or as to how, managers respond. Finally, change must be embedded with refreshed management processes; performance evaluations, rewards, career management, product development, and the logistical process must change (Prahalad & Oosterveld, 1999).

Ghoshal and Barlett (1997) reported top management creates the challenge and commitment necessary to drive change and ensures that the company continuously renews itself. Rather than trying to control strategic content, top management focuses much more on shaping organizational context.

Kouzes and Posner (1995) reported the pace of managerial work is so rapid and inflexible the average executive has an average of nine minutes of available time to spend on any individual item. While the absolute amount of time spent on a task might be longer, it takes discipline to concentrate on short intervals of activity, and this results in one really having to focus on what is important.

Covey (1989) stated:

The ability to manage well doesn't make much difference if you're not even in the right jungle. But if you are in the right jungle, it makes all the difference. In fact, the ability to manage well determines the quality and even the existence of the second creation. Management is the breaking down, the analysis, the sequencing, the specific application, and the time-bound left-brain aspect of effective self-government. Covey's own maxim of personal effectiveness is this: Manage from the left; lead from the right. (p. 147)

Witt (1992) reported that voice and choice reflect participation in decision-making. When subordinates make decisions without discussions with the supervisor, they are acting autonomously and essentially have choices; but they are making decisions without the supervisor's voice. According to Witt, this reflects a low level of participation in decision-making. A low level of participation in decision-making is also reflected in situations where the supervisor makes decisions without discussion with the subordinate. In this case the subordinate has neither choice nor voice.

Bennis and Townsend (1995) stated that making the transition from the old style of leadership to the new is a challenge for top management at every organization. The militaristic, command-and-control leadership of the past has become an anachronism. In the post-downsizing, flat-management era today, a new leadership style is necessary.

Nadler, Shaw, and Walton (1995) reported the need for the senior management team to lead change may mean that the composition of that team may have to be changed. Different skills, capacities, styles, and value orientations may be required. Most successful reorientations seem to involve some significant changes in the makeup of the senior team. This may require outplacement of some people and importing others, either

from outside the organization or from the outside the coalition that has traditionally led the organization according to Nadler, Shaw, and Walton.

Tichy (1997) reported that teaching cannot be confined to the rarefied upper reaches of senior management. Tichy points out that seasoned leaders have an invaluable legacy to pass on by virtue of their many years of experience and their proven records of success. It is also true that the most important lessons often come from the tough, even failure, situations, so losing these hard-won lessons would be especially wasteful and costly to their organizations, according to Tichy. Teaching is at the heart of leading. Through teaching, leaders lead others.

Tracy (1989) contended that nothing affects employees' desire and ability to do the job more than competence of the people who manage them. Tracy points out that this applies all the way up the line. What is needed in the workplace is not more sophisticated theories and models of management but a greater sensitivity to people.

Starcevich (1998) contended that effective managing experiences correlated highly with the leader and employee having a history of working well together and viewing each other in a positive light.

Quinn (1997) explained that by finding our own moral core and beginning to see ourselves and our organizations in new and more productive ways, we can transform ourselves from victims to powerful agents of change.

Tobias (1999) pointed out that the key to success in the workplace is understanding the work habits of those around you. This understanding comes through experience over a period of time according to Tobias.

Kelman (2000) stated that successful initiation of change depends more on leaders' behavior than many managers believe. Often, those on the front lines need only authorization or encouragement from upper management to get started. Kelman pointed out that at least some overlap must occur between the changes leaders seek and the beliefs of those on the front lines.

Centralization Versus Decentralization

Goldhaber (1990) contended that in centralized organizations, power and decision points are few. In decentralized organizations, authority and decision making are spread throughout the organization, and authority is generally delegated to the smallest practicable units. Goldhaber stated centralization is more likely in a tall structure and decentralization in a flat structure. Centralization of authority can usually expedite decision making because fewer people are involved. Decentralization involves more people and takes more time but may improve organizational morale by giving more employees the opportunity to be involved in decision making. In a centralized organization, one person is central to all the messages, wherever they flow. In a decentralized organization, no one person is central to the message flow. According to Goldhaber, on noncomplex problems, the speed of centralized networks is faster than that of decentralized networks. The decentralized network was found to solve complex problems not only faster but with fewer errors than do other networks.

Deutsch and Kochen (1980) stated:

The most highly centralized system we can imagine would be one in which, given a domain of space or clients and a scope of functions, all decisions and services were made and performed by a single compact

actor-as-an-individual located at one point. He or she completes each operation as a single act without any sequence of negotiations or other feedback interactions with the client. (p. 16)

Deutsch and Kochen (1980) believed a centralized system would require an ideal situation and an individual with tremendous focus, attention, competence, and an untiring attitude, and little room for error to provide perfect service in an extremely centralized system. Very few, if any, organizations or agencies exist in the extreme centralized form.

Hampton (1994) defined decentralization as “taking important decisions at lower sales organization levels.” According to Hampton, most sales organizations have a combination—some activities are decentralized and some centralized. He also stated when sales organizations are highly specialized they are often centralized. Centralized structures can provide more integration capability. Hampton (1994) stated: “A decentralized orientation typically has effectiveness and flexibility advantages; centralized orientations often have efficiency advantages” (pp. 13-15).

Brooke (1984) stated in his study that advantages and disadvantages occur in all areas of management, and they are all related to many different situations that can occur in any style. One advantage that can be gained from centralization is improved allocation of resources, but this is not the only one. Effective management cannot be gained from the inefficient allocation of material resources.

Deutsch and Kochen (1980) believed some advantages exist in being an extremely centralized organization. These advantages include the chance of achieving and holding concentration of resources, quickness and consistency of decision making, higher visibility, and much easier orientations for customers looking for service.

A disadvantage or weakness of an extremely centralized organization is that it consists of a tall structure that is usually larger and more serious. Another is its liabilities include information overload that is often crowded with communication avenues and facilities, which results in long delays of partial or general breakdown of the system. Also, many of the solutions for handling overload usually create further liabilities, such as the increase in long waiting lines, frequent errors, and low morale of employees (Deutsch & Kochen, 1980).

According to Jones, Bowers, and Fuller (1982), the FAA is a very closed type of organization but is not an extreme centralized one. The FAA is very structured, with a top-down type of management style that is slowly changing because of some initiatives to push some of the authority down to lower levels of the agency.

Subordinates in a hierarchy of power and authority usually have someone of power who is often responsible for taking care of problems and other areas of interest centered on decision making. The person in power is also responsible for the daily routines, as well as limited amounts of resources. Extreme forms of centralized decision making of this nature do not ever survive for long periods of time, reported Deutsch and Kochen (1980).

According to Goldhaber (1990), to improve motivation and eliminate poor performance, management must empower its employees. Empowering employees gives them accountability and responsibility that go along with being allowed to participate in the decision-making process. Management must also realize employees cannot be held accountable or responsible without the proper training and resources to successfully accomplish the task assigned. This process is called decentralization, and the intention

behind this process should be to get employees involved in the decision making. Power in this process must be delegated to the lowest possible levels. This would result in a more positive work environment and minimize the chances of sabotage.

Jones, Bowers, and Fuller (1982) reported that many of the FAA organizations still have tall structures. Most managers had military backgrounds and were comfortable with an emphasis on structure, command, duty, and discipline. Most had moved from the military to a job somewhere within the FAA and then moved to a management career in the system. Therefore, it was not surprising that as managers they were reluctant to empower employees.

Decentralization is not a value in itself. Some key values are quick responsiveness, reliability, adequacy, and quality of the necessary or requested service. At a lower cost, a service system that is more efficient with increased values can be delivered. In relation to these goal values, the various structural patterns of centralization and decentralization are mere instruments, to be judged by the benefits they are apt to bring under each set of a particular condition. (Deutsch & Kochen, 1980, pp.16-19)

Centralization and decentralization are just instruments to be judged, as well as used, by various organizations as they see fit. Advantages and disadvantages exist when utilizing either one of these systems or a combination of both in whatever particular situation management believes will benefit them or the organization the most, reported Hersey (1984).

In a decentralized environment, Goldhaber (1990) found employees felt more positive about themselves and about their work environment when there were fewer control or authoritative processes were in place. Morale is another factor which may be improved when employees perceive they have some ownership around the product being produced.

It is the responsibility of management to decentralize an organization. In a highly centralized organization, the chief executive alone may be faced with such a decision. In a less centralized organization, several managers may be involved in the decision making. If the organization is large, decisions of this nature will hardly be noticeable except in situations where a consensus is being sought among key players who are responsible for carrying out the process. The contributions or input toward the organizational goals are factors that truly motivate key people involved in the process because of the visibility. Organizations with an employee-oriented environment usually have the highest output (Deutsch & Kochen, 1980).

Brooke (1984) pointed out that excluding employees in the decision-making process is important and has supported centralization of an organization, especially when management needs to make a quick decision. This is the way management keeps control of an organization. Personal power is believed to be the way to gain the respect of others. But, one could not be farther from the truth with this kind of mind set. An organization can have too much authority which can produce unwelcome and unexpected reactions in employees at various levels, which could hinder many of its processes, such as the flow of information throughout the organization, upward communication, and customer responsiveness. Centralization has been known to produce flexibility because of decisions being made at the top. Centralization has also been known to have its problems and the tendency to make them worse because of its tall structure. The ability to get things done quickly in the centralized process is a factor as well because centralization of authority can usually expedite decision making since fewer people are involved (Brooke, 1984).

Brooke (1984) also stated in the centralized system, instances occur where the decision-making processes have been slow because of its tall structure. Usually in a centralized organization the structure is tall, and as a result, it takes an enormous amount of time for information to flow upward and downward, as well as horizontally. This kind of system could easily find itself missing opportunities because of the slow decision making at the head office in cases where the decision may be dependent on input from the lowest level.

Brooke (1984) reported motivating employees in a centralized system could also be a problem because of employees' lack of involvement in the decision-making process. In a centralized organization, decision points are few, and morale is often lower than in decentralized organizations.

Brooke (1984) stated that planning in the centralized process should take on a global view, which is usually dependent on information being supplied by the subsidiaries. Planning was identified as one of several areas where centralization easily leads into a self-perpetuating situation that goes beyond the norm, which yields the organization the worst of both worlds, and is linked to two other disadvantages of centralization. One of the difficulties is that of achieving the high degree of collaboration required to be successful in planning globally in a centralized system. Another is the inability to adequately make the necessary contacts that can lead to centralization.

To become self-governing requires good communication throughout the organization so that a positive work environment may materialize, creating relationships that produce confidence in the workplace. This will also bring about personal contact which is good for business (Brooke, 1984).

According to VanGundy (1992), organizations contain formal and informal communication networks, which help form a structure in the company and help determine its innovation effectiveness. For instance, a marketing manager needs to receive new-product information quickly and efficiently. Moreover, this information must be of high quality. VanGundy stated that an inappropriate or dysfunctional structure thus might jeopardize product quality.

Brooke (1984) reported many of the local regulations established to oversee the import process hinder production growth because of the centralized system that is in place. Some of the newly industrialized countries will reap many of the benefits in the ever-expanding markets overseas because of their freedom to venture into these markets without their hands being tied.

A centralized process can provide one source as a focal point for the whole organization. This can be cost effective because it cuts the cost of having a staff everywhere, especially if one person can provide service to all of the entities necessary from a centralized point (Brooke, 1984).

Centralization and decentralization can be very useful if the right mixture or combination is utilized in the right places at the right time. Many organizations are still searching for that right mixture, and one can safely say no one has it down to an exact science.

According to Peters (1994), the turbulent marketplace today requires instant response to customer needs, the customization of products and services-and imagination from one and all. None of these attributes were attainable in the cumbersome bureaucracies of the sort originally found at the Union Pacific Railroad, ABB Asea

Brown Boveri, Titeflex, or Lakeland Regional Medical Center. This situation did not occur in a many times decentralized International Business Machine (IBM), or at General Electric (GE) before Welch.

Peters (1994) reported that breaking huge organizations into small and genuinely independent units goes miles beyond the ambitions of traditional decentralization. Many companies, large or small, are decentralized on paper but in attitude essentially remain centralist.

Farazmand (1994) believed:

Decentralization in the United States has led to greater vertical fragmentation of operations and authority. This devotion of authority to state and local governments in the federal programs that do remain, and the greater assumption by state and local governments of various other domestic responsibilities, has profoundly changed the patterns of influence and role relationships among and within U.S. political jurisdictions. Authority patterns are not monotonic but vary between and within public service configurations.

The term "decentralization" hardly captures what has happened because it implies a hierarchy in which authority is devolved downward from the national government. (p. 83)

Farazmand (1994) reported decentralization has brought about some major changes in that it has caused power to be delegated to the lowest possible levels in some cases. Many employees are beginning to experience being part of the decision-making process in the public and private sectors as a result of these changes.

Many federal agencies are experiencing some of these changes with pressures from their employees to participate in the decision-making process. The recent acquisition reform has made it possible for purchasing authority to be pushed down to the line of businesses so that they can purchase services from other vendors (Gore, 1996).

Etzioni (1964) referred to a study done by Simon, Smithburg, and Thompson who:

discussed the features and their importance in reference to the effect of centralization on the efficiency and effectiveness of an organization. Observing the classical approach, it was determined that the following question must be examined which is: Whenever there are two or more organizational units, with one (or more) of them superior to the others in decision-making authority, which decisions should be left to lower one(s), and which should be made by higher unit(s)? (p. 28)

Drucker (1974, 1993, 1995), Etzioni (1964), and Peters (1992, 1994a, 1994b), reported the more people are involved at the lowest possible level in the decision-making authority, the more the organizational structure becomes decentralized. Limiting the kinds of decisions to be made by upper management will create more of a positive work environment because this lends itself to people at the lower levels being involved in the decision-making process. People become more empowered and feel good about having some ownership of the products and services they are responsible for producing. This process can be seen as creating a system where low centralization will result because of increased participation in the decision making by employees.

When people at the lower levels are allowed to make decisions in those areas where they should, they become more motivated (for example, in the AF Division within the FAA Academy, branch managers began to give more monetary awards without the intervention of the division manager).

Several factors affect the level of centralization such as: cultural norms (centralization is more acceptable to the Germans than to the British), the educational level of the unit heads (the higher the level of education, the greater the decentralization the organization can tolerate), and the attitude of upper management (Etzioni, 1964). The

degree of centralization in an organization can be affected by the availability of specialized service units, because these units are often too specialized and can make this type of process too expensive when connected to the lower levels of the organization.

Etzioni (1964) reported that the age of technology played a major role in the 1960s, which brought about increased centralization in large organizations because of computers. This required greater communication between departments and usually resulted in more centralized planning and authority in every part of the organization. Proof exists in AF organizations that centralized organizations tolerate less local innovation or new ideas and also have less flexibility. Persons in managerial positions, however, are more likely to be in a position to supply facilities independent units could not manage and to enforce labor relations and standards, such as tenure, more efficiently. Decentralization is not always a welcomed sight either, especially when it is first introduced, because management usually views it as a process to take away its power.

Pinsonneault and Kraemer (1997) reported that earlier studies conducted regarding the impact of information technology on middle management are characterized by conflicting findings. Some studies proposed that information technology resulted in massive downsizing. Other findings, however, indicated that information technology increased the number of middle managers. According to Pinsonneault and Kraemer, to settle the conflict, the issue was further studied using the following variable: the degree of centralization of organizational decision authority. A survey of 155 city governments was used for the study. Results illustrated that organizations with decentralized decision authorities exhibited a decline in the number of middle managers. On the other hand, the

number of middle managers in organizations with centralized decision authorities increased.

Drucker (1974), in "People Are Our Greatest Asset," reported that early resistance to decentralization was due to fears that top management would be weakened. He also concluded that "decentralization makes top management stronger, more effective and more capable of performing its own tasks" because those managers had more time to focus on those tasks that needed their attention by empowering their people (p. 301).

Collins (1999) reported great organizations have figured out that the old adage, "People are your most important asset," is wrong. He stated the right people are the most important asset. According to Collins, the right people are those who exhibit the desired behaviors, as a natural extension of their character and attitude, regardless of any control or incentive system. The challenge is not to train everyone to share your values but to find people who already share your core values.

Freiberg and Freiberg (1996) reported that nothing less than the perpetuation of values, norms, and philosophy makes up the special Southwest culture. Southwest is an anomaly in the airline industry because of its business success and also because, in more ways than one, Southwest is a secure place to work. The security has nothing to do with ground operations, maintenance, or in-flight procedures. It refers to the emotional, psychological, and spiritual security employees sense. At Southwest fun and creativity are emphasized. According to Freiberg and Freiberg, Southwest is referred to more as a community than an organization because of its extended family atmosphere. Southwest employees are drawn together in a bond continuously cemented in their minds by vivid reminders of the importance of family and by memorializing the family history.

Drucker (1993) explained that the nature of the task determines the culture of an organization, rather than the community in which that task is being performed. Drucker stated that the value system in each organization is determined by its task. Every hospital in the world, every school in the world, every business in the world has to believe that what it is doing is an essential contribution to its community and society—the contribution on which all the others in the community depend in the last analysis. Drucker pointed out that for a task to be performed successfully, it has to be organized and managed the same way. In its culture, the organization thus always transcends the community. If the culture clashes in an organization with the values of its community, the culture of the organization will prevail—or else the organization will not make its social contribution.

According to Benfari (1995), the strength and stability of the culture of an organization depends on interacting factors: time, patterns of reinforcement (positive or punitive), and the clarity of the assumptions within the group. Benfari reported that a well-functioning group whose members understand their goals, roles, interpersonal styles, and procedures are happy. When ambiguity occurs in the group, anxiety, frustration, and stress can develop. Benfari (1995) stated that two of the important elements of culture are the working environment and the organization's general assumptions.

Champy (1995) explained that in reengineering management, the processes must focus on mobilizing, enabling, defining, measuring, and communicating to achieve the organizational culture that enables a continuous process of reengineering—to achieve success. Drucker (1974) pointed out Japanese managers, IBM, and Zeiss had all learned management became more effective when it empowered employees to perform the tasks they could.

Responsible employees at all levels of the work force, public and private, are very important to decentralization. It is hard for most people to realize it is the work management that is being decentralized, not business management, which many get confused (Drucker, 1974).

Drucker (1974) recognized managers may still resist delegating responsibility to workers because a responsible work force does indeed make very high demands on managers. To require responsibility of others without requiring it of oneself is useless and irresponsible. People expect and demand managers enable them to do a good job and work productively and intelligently. Drucker (1974) further discussed the importance of the teamwork of the workforce, the team members' cooperation in getting the job done, and their expectations for "team leaders, that is, management, to hold themselves to high standards and to take their own job seriously" (p. 303).

Drucker (1974) pointed out that in this day and age, not many people want to be held responsible and accountable because along with accountability and responsibility comes blame. He stated some employees believe being empowered is all well and good but are concerned about the consequences when a mistake is made. In other words, many individuals would like to have the freedom and the right to make mistakes without the possibility of losing their jobs as a result. They believe that in a truly empowered environment this type of freedom would exist. As mentioned earlier, managers must also hold themselves accountable and responsible, the same as employees. To require this of employees and not of themselves would be considered counterproductive.

Drucker (1974) reported that people are much more productive and responsible when they have the support of management and the perception that management is

competent. When employees have trust in the organization and in management, it creates an atmosphere that plays a major role in how tasks are accomplished. Individuals believe they will obtain the resources they need to perform their jobs successfully. Information sharing plays a major role also. It aids in the productivity and in the motivation of the employees to complete their jobs in a timely and effective manner. Much respect and confidence come from employees knowing they have a supportive and also very competent superior. Another thing that helps in productivity and responsiveness is employees knowing their manager or superior will hold himself or herself to the same high standards to which they are being held (Drucker, 1974).

Schein (1999) reported that culture is a group phenomenon. It is shared tacit assumptions. Schein pointed out that the best way to assess culture is to bring groups together, to talk about their organization in a structured way that leads them to tacit assumptions. Schein believed that you can decipher your own cultural biases if you make yourself partially marginal in your own culture. Looking at the cultures of other organizations and working with consultants or colleagues from other organizations to reflect on your own tacit can be beneficial.

Manz and Sims (1989) contended that culture can be thought of as an evolution of acceptable responses that have worked in the past—patterns that were guided by the norms, values, and beliefs that existed during top managers' rise to power. Manz and Sims pointed out that a true Super Leader will develop an ability to recognize the culturally relevant needs of employees today—not yesterday. The super leader would then devote significant effort to deliberately orchestrate an organizational culture for high performance and development of people according to Manz and Sims.

Deal and Kennedy (1982) pointed out that the stronger the culture, the richer and more complex the value system, the longer the chain of evidence that these values really do produce results. Deal and Kennedy reported that the values and beliefs of an organization indicate what matters are most important and need immediate attention—for instance, current operations in one company, external relations in a second, longer term strategy in the third. They suggested what kind of information is taken seriously for decision-making purposes—experienced judgment of the “old hands” in one organization, detailed “numbered-crunching” in another. They define what kind of people are most respected: engineers versus marketing versus financial types (Deal & Kennedy, 1982).

Harvey (1990) reported that at both ends of the centralization continuum, you have low levels of change. High centralization means dominant use of authoritative command and limited participation, a situation that makes change difficult according to Harvey. Harvey (1990) contended that high decentralization yields high autonomy and modestly controlled chaos. If everyone does his or her own thing, with no direction being provided, this too, makes change a complicated process to achieve.

Decentralization: Approaches and Dimensions

According to Deutsch and Kochen (1980), people recognize decentralization as a matter of authority. The study expressed those who want to maintain power, keeping as much as they possibly can in their own hands, have the tendency to give their employees as little power as possible. Usually when the word *power* is mentioned, a centralized

system comes to mind. Information flow and decision-making responsibilities are both drawn toward the center, and power is not shared. The study has shown that too much authority can affect centralization. The idea or thought that centralization can give its key agents or top management a higher level of power is not necessarily the case in many situations. If upper management would just take a moment to think this through, it would quickly realize an organization may decrease any chance of success by keeping its people in the dark by not sharing the necessary information. Increased centralization will not add value to the decision-making process; if anything, it will eventually weaken it.

Deutsch and Kochen (1980) reported some supporters of decentralization in municipal services, such as schools, seem to take interest in the self governing for local decision making. They also take interest in the freedom and honor they expect as a part of that self-governing process. Most employees involved in decision-making processes would like to feel comfortable in making mistakes and knowing they have the freedom and the right to correct them without being harassed by someone in management. This is a highly desirable position many employees would love to experience rather than the more error-free services they could receive from a central agency. The ideals of federalism may be considered an integral part of bringing government closer to the people.

Deutsch and Kochen (1980) found that it is not unusual for some organizations to decentralize their marketing and centralize some of their accounting functions. Within the Academy, the AF Division along with two other divisions, Air Traffic and Regulatory Standards, are marketing their services as they move more in the direction of a fee-for-service type of process. Some marketing takes place with the international team located

within the FAA Academy where the AF Division is a participant. Much of the accounting in the FAA is centralized, although many of the organizations have some small accounting processes that are performed to keep track of many of their activities and allowances. According to Deutsch and Kochen (1980), accounting processes are more prevalent in centralized organizations.

Deutsch and Kochen (1980) stated:

There are pressures that exist in both the public and private sectors, by the clients and their servers at the lower levels of the service organization for increased participation in both reallocation of organizational resources and redesign of performance and structure. (p. 13)

Gore (1996) reported government agencies have been applying pressures for participation in the redesign of performance and structure, and because of recent reform, they are being allowed to do just that. In the FAA, the allocation of funds is being sent to the lines of businesses for them to have the flexibility of purchasing products and services from various vendors, including the AF Division at the FAA Academy. Changes in the FAA operations, because of these pressures, have definitely taken place. Many of these changes have occurred in an effort to streamline various processes and to improve the efficiency and effectiveness of the organization. Productivity has also improved as a result of initiatives to reform government and of technologies that have allowed many to automate various functions. As a result, federal organizations are doing more with less or working smarter (Gore, 1996).

Drucker (1995) reported that when it comes to reinvention as Vice President Gore spoke about in his initiatives, it always fails because the first step is to downsize.

Drucker pointed out that downsizing has turned out to be something that surgeons, for

centuries, have warned against. Drucker reported there have been a few organizations—some large companies (GE, for instance) and a few large hospitals (Beth Israel in Boston, for instance)—that quietly, and without fanfare, did turn themselves around, by rethinking themselves. They did not start out by downsizing. They knew that to start by reducing expenditures is not the way to get control of costs. Drucker explained that the starting point is to identify the activities that are productive, that should be strengthened, promoted, and expanded.

Federal decentralization presupposes that the activities within an autonomous business are organized on the functional principle though, of course, the use of teams is not excluded. The autonomous business of a decentralized structure are designed to be small enough to put to work the strengths of a functional structure while neutralizing its weaknesses.

But the starting point of decentralization is different. Functional and team organization starts with work and task. They assume that the results are the sum total of the efforts. If only efforts are organized properly, the right result will follow is the underlying premise. Decentralization, by contrast, starts out with the question What results do we aim for? It tries to set up the right business first, that is, the unit that will have optimal capacity for results and especially for results in the marketplace. Then the question is asked what work, what efforts, what key activities have to be set up and organized within the autonomous business?

It is desirable, of course, to set up the same or, at least, a similar functional structure for all or most of the autonomous businesses within a organization. (Drucker, 1973, p. 573)

Organization Layout

Robbins (1994) reported management can mix and match the three structural components of complexity, formulation, and centralization in a multiplicity of ways. The overall structure of an organization generally falls into one of two designs. One is the mechanistic structure, which is characterized by high complexity (especially a great deal

of horizontal differentiation), high formalization, a limited information network (mostly downward communication), and little participation by low-level members in decision making. Robbins reported that the mechanistic structure is synonymous with the rigid pyramid-shaped organization. At the other extreme, the organic structure, is low in complexity and formulation, possesses a comprehensive information network (utilizing lateral and upward communication as well as downward), and involves high participation in decision making (Robbins, 1994).

Wagner and Hollenbeck (1992) pointed out that many forms of organizational structure exist. A brief comparison between GM and Apple suggested that no one type of structure fits all organizations. Instead, each type of organization structure has distinctive strengths and weaknesses that make it more appropriate for some situations than for others. Structuring an organization involves choices among various alternatives.

Goldhaber (1990) reported that structure refers to the network of relationships and roles throughout the organization. Structure enables the organization to meet its objectives effectively and in an orderly manner. Goldhaber stated that classical theory usually distinguishes two kinds of structure: line and staff. Line organization includes the chain of command and the primary functions of the formal organization. It can be readily described by an organizational chart.

According to Goldhaber (1990), staff organization supplements line organization. The staff people advise and serve the line people. Staff people may be general or special. A general staff member is usually identified by the title "assistant to" and serves one member of the organization. Special staff people serve large segments of an organization.

Hodge and Anthony (1991) reported that organizations can be differentiated on at least six foundations: similarity of work or function, product, geography, market, process/interface, or equipment. Each of these bases has its advantages and disadvantages, and there is no best one for all organizations. Hodge and Anthony reported that in most organizations, a combination of bases is used. Organizations attempt to integrate their activities by creating a design that coordinates the various differentiated tasks. These integrative structures include line structure, line-and-staff structure, functionalized structure, matrix structure, and linking-pin structure. Each of these has its advantages and disadvantages, and no one structure is best for all organizations (Hodge & Anthony, 1991).

Hodge and Anthony (1991) reported that effective structure should maximize efficient goal accomplishment. It should also encourage innovation, flexibility, and adaptiveness. It should bring out the best in its members so that human resources are developed and performance is maximized. Finally, it should facilitate coordination of overall organization activity in addition to strategy formulation and implementation.

According to Drony and Romm (1990), organizational politics involves influencing the decision-making of others in an organization through means outside the formal organizational structure. The general level of political behavior in an organization has been shown to influence the degree to which employees believe and trust what management says (Kumar & Ghadially, 1989).

Wagner and Hollenbeck (1992) believed a way of looking at organization design is to see it as a process that allows one to make choices. Another way of looking at this is it gives management the opportunity to acknowledge various situations it may be faced

with in a particular organization and put them to use by placing them in a structure that seems to fit them best. This is guided by putting a plan in place relating to or aiding the vision: No single management approach or structure is the right one for every situation, and the usefulness of a particular approach depends on the situation. Organizational design should be based on principles that reflect a particular type of structure that will contribute to the overall effectiveness.

Wagner and Hollenbeck (1992) contended that the main goal of organization design is to acquire organization effectiveness. Many organizations see this as a true measure of organization success to achieve their goals and objectives. In an effective organization, employees' attitudes, group and inter-group processes all play a part in an organization meeting its goals. Some other factors that contribute to an organization accomplishing its goals and objectives that serve as the firm's purpose in the organizational structure. Goals and objectives of this kind may include targets producing profitability, growth, market share, product quality, efficiency, stability, and other similar outcomes. If an organization fails to set such goals, its chances at success would be minimized, and efficiency could not be accomplished to satisfy its purpose.

Wagner and Hollenbeck (1992) described how an organization must be effective to take care of its customers' demands. By meeting the demands of the various constituencies, an organization has a very good chance of surviving in a very competitive society. For example, if an organization continues to meet the demands of its many different supporters in the way of goods and services, it will most likely continue to reap the benefits of its customers' patronage. Timeliness of payment to its suppliers will also

ensure the continued fulfillment of materials needed to make whatever product is being produced or service provided.

Wagner and Hollenbeck (1992) stated that another concern that must be met or satisfied for an organization to be successful, is that of human resources (employees). Most successful organizations must possess a concern for their people, as well as a concern for the task in the organization and for the employees' welfare. Fairness in pay and benefits should occur as well as a good work environment where the decision-making process includes the employees. This will aid in an organization being successful. If an organization takes care of these needs, it is going to be able to recruit new employees and maintain old ones. If a firm fails to satisfy any one of these demands, its effectiveness will be weakened because the potential loss of required resources, such as customers or employees, threatens its existence (Wagner & Hollenbeck, 1992).

According to Wagner and Hollenbeck (1992), some individuals consider organizational effectiveness to be the same thing as organizational productivity, but they are not the same. The more recent concept does not think only about whether a firm is producing the right goods or services. An organization today producing more widgets than ever before is certainly considered productive, but it is also ineffective if few people may need or buy those widgets. Two other terms that are not considered to be the same are effectiveness and efficiency. Organization efficiency means decreasing the new raw materials and energy consumed by the production of goods and services. It is usually measured as the ratio of outputs produced per unit of inputs consumed. Efficiency means doing the job right, whereas, effectiveness means doing the right job. Effectiveness can also be defined as deciding whether an organization is producing what it ought to produce

in light of the goals, objectives, and customers' demands that control its accomplishment and its reason for existence (Wagner & Hollenbeck, 1992).

Gore (1996) pointed out that much work remains to be done throughout federal agencies to create a government that will cost less and operate more efficiently. The Clinton-Gore administration has made some of this possible through its initiatives in the National Performance Review (NPR) process. It is now possible to decrease the layers of management and push power down to the lowest possible levels, but it has been slow in happening in many areas. As referred to in the "Progress in Streamlining Management Control Positions" section, the AF Division within the FAA Academy has made some great strides toward this process, because of the 1993 NPR initiatives.

As a result, the AF organization has become more efficient and effective in many areas. Productivity has also increased because the organization is still able to exceed previous levels in the delivery of training to the field technicians with a little over half the staff size of previous years.

Ghoshal and Barlett (1997) reported an organization is more than just an economic entity composed of a hierarchy of tasks and responsibilities. Above all else, it is a social institution, made up of people and defined by their roles and relationships. Individualized Corporation differs in its fundamental philosophy from that of the traditional divisionalized organization.

Blanchard, Blanchard, and Ballard (1996) reported that today's business world is characterized by increasing change—technological, cultural, social, economic, and personal—the net effect of which is increasing anxiety, insecurity, and more pressure than perhaps ever before on today's employees, managers, and business owners.

Hampton, Summer, and Webber, (1968) reported that organization morale depends upon the successful adjustment of human beings to one another within the framework of the technical process in which they have to work. Hampton, Summer, and Webber pointed out that if individuals are to go above and beyond the call of duty, the organization must be structured so that the kinds of situations that emotionally disturb people are infrequent.

Havelock and Zlotolow (1995) pointed out that successful relationships must have some structural basis, some definition of roles, working procedures, the flow and integration of tasks and responsibilities, and expected outcomes.

Bolman and Deal (1991) contended that organizations that face highly uncertain environments need high levels of flexibility and adaptability to survive. They are likely to be less bureaucratic and more decentralized. A well-known example is Digital Equipment Corporation, for many years a fast growing manufacturer of microcomputers. Historically, Digital had no organization charts, paid little attention to job titles, and encouraged creative entrepreneurship in its employees. Digital was once called by a major industry magazines to check on the title of one of its executives and was surprised to learn that the company was not sure what his title was and did not care because it would probably change soon, anyway.

Bolman and Deal (1991) reported that organizations in more uncertain, turbulent, and rapidly changing environments will develop more sophisticated architectural forms. New specialties and roles are required to deal with emerging problems according to Bolman and Deal. A more specialized and diversified role structure requires more elaborate, flexible approaches to vertical and lateral coordination. Bolman and Deal point

out that the effectiveness of an organization is therefore contingent on how well its structure matches or can deal with the demands of the environments.

Kotter (1996) reported that the pressures on organizations to change will only increase over the next decades. Yet the methods managers have used in the attempt to transform their companies into stronger competitors—total quality management, reengineering, right sizing, restructuring, cultural change, and turnarounds—routinely fall short, says Kotter, because they fail to alter behavior.

Hierarchy and Centralization

According to Wagner and Hollenbeck (1992), hierarchy, and its, use vary from organization to organization. It was also believed that authority varied according to the level of managers at the top, middle, or supervisory, who are in power and have the right to make the decision and issue orders around the coordination of activities. This also applies to the one who has the responsibility to direct the organization's overall progress. Managers in the United States prefer centralization over decentralization because it allows them to concentrate both authority and decision-making at the top where it is convenient for their use. Many managers in a centralized type of process feel keeping this power at the top allows them to reap the benefit of making decisions that make them comfortable. Keeping decision-making power at the top gives management alone the opportunity to make decisions in a centralized firm and to make decisions that are in its own best interest. As mentioned in some previous studies, the centralized process allows for quick decisions to be made by management, and usually without input from subordinates.

Regardless of the interest top management has in centralization, decentralization is becoming more and more attractive in modern organizations (Wagner & Hollenbeck, 1992).

Wagner and Hollenbeck (1992) believed decentralization, power, and decision making are spread downward and outward throughout the organization. Several factors have been found that influence the spreading of power and decision making in an organization. First, some decisions require management to consider large amounts of information. Managers are often overloaded by the task of processing all this information and, therefore, find it useful to involve more people in the decision-making process. Second, decentralization could possibly be motivated by a need for flexibility. Sometimes the local conditions may need different parts of an organization to respond differently, and managers of those organizational units must be given the authority to make their own decisions. Third, decentralization may be found to be useful when interacting with employees who lack motivation in the decision-making process.

White, Crainer, and Hodgson (1996) argued that change and uncertainty are the new touchstones of leadership excellence. The old management competencies of planning, organizing, and controlling are no longer enough. The business of today and tomorrow can be seen as a series of fast flowing rapids full of excitement, challenge, adventure and uncertainty; where the risks will be higher and the rewards greater. White, Crainer, and Hodgson stated that to become a successful leader of the future you must actively pursue these uncertainties—if you do, the possibilities are immense.

Morale may also increase as a result of making employees feel as though they have some ownership in the process. In any of these cases, the failure to decentralize

undermines the whole process and can be very damaging to intergroup relationships.

Decentralization should be utilized when an organization desires to value its employees' opinions, counsel, and experience. On the other hand, centralization should be used when management wants to maintain greater control (Wagner & Hollenbeck, 1992).

Cartwright and Zander (1968) stated that ever since the days of Machiavelli there have been theorists who conceive of leadership essentially in terms of the possession and exercise of power. Although during this day and age few contemporary theorists would seriously maintain that leaders of most groups and organizations today rely on coercion or "brute force."

Hersey and Blanchard (1993) pointed out that now, as perhaps never before, there is a growing awareness that the success of an organization is directly dependent on the effective use of human resources. Hersey and Blanchard reported that considering the challenging problems in the management of organizations, business, government, not-for-profit, school, military, and family we need to realize that the real test of our abilities as leaders and managers is how effectively we can establish and maintain organizations.

Drucker (1999) reported that by now, it should have become clear that there is no such thing as the one right organization. There are organizations, each of which has distinct strengths, distinct limitations and specific applications. Drucker pointed out that it has become that organization is not an absolute. It is a tool for making people productive in working together. As such, a given organization structure fits certain tasks in certain conditions and at certain times.

Drucker (1999) reported that one hears a great deal today about "the end of hierarchy." This is blatant nonsense according to Drucker. In any institution there has to

be a final authority, that is a “boss”—someone who can make the final decisions and who can expect them to be obeyed.

Drucker (1998) believed that organizations of today still fall under the command-and-control type of structure. With emphasis on decentralization, central service staffs, personnel management, the whole apparatus of budgets and controls, and operations. Drucker reported that this stage culminated in the massive reorganization of General Electric in the early 1950s, an action that perfected the model most big businesses around the world (including Japanese organizations) still follow.

Maxwell (1999) pointed out that everything rises and falls on leadership and that knowing how to lead is half the battle in this day and age. Maxwell explains that the key to transforming yourself from someone who understands leadership to a person who successfully leads in the real world is character. Your character qualities activate and empower your leadership ability, or they can stand in the way of your success.

Kotter (1985) contended that in today’s complex work world, things no longer get done simply because someone issues an order and someone else follows it. According to Kotter most of us work in socially intricate organizations where we need the help not only of subordinates but of colleagues, superiors, and outsiders to accomplish our goals. This often leaves us in a “power gap” because we must depend on people over whom we have little or no explicit control.

Kotter (1985) reported that power and influence is essential for top managers who need to overcome the infighting, foot-dragging, and politicking that can destroy both morale and profits; for middle managers who do not want their careers sidetracked by

unproductive power struggles; for professionals hindered by bureaucratic obstacles and deadline delays; and for staff workers who have to “manage the boss.”

Empowerment

Koch and Godden (1996) reported that large corporations were believed to be created or designed by management to have control of their business and also for synchronization. With this kind of attitude from management, customer focus often gets lost in the shuffle and becomes very costly because of the lack of focus and concern by management for the customers. This mind set led to management being selfish by putting its own interests and needs in front of those of the customers, investors, employees, and society. Any business or corporation, regardless of its size, must always remember why it is in business to succeed.

Koch and Godden (1996) reported even in the 21st century, much of management still takes away a lot more value than it adds. As a result, businesses sometimes fail to survive. Complicated processes continue to hinder growth because of organizations' tall structures. Some of the large businesses have far too many products, divisions, functions, and managers, which increase their complexity and ability to bring in the revenues.

However, there is a saving grace for a big business that wishes to make a change, which may result in its being successful, according to Koch and Godden (1996). Koch and Godden reported that first the business would need to simplify its structure by reducing layers of management, and secondly, it would need to perhaps narrow its list of products and services. Streamlining many of its functions is another way of simplifying and improving processes. Management must be willing to step out on the limb and give

up some of its authority. This would allow businesses to involve others in the workplace in the decision-making process and improve efficiency by getting the right person to do the right job. The managers left in the system would have more time to focus on those things they really should be doing as a result of empowering their workforce and allowing employees to “manage without management” (Koch & Godden, 1996, p. 4).

Gore (1996) reported layers of management have been removed and power pushed down, in some cases to the lowest possible levels. Work remains to be done in the way of streamlining, training, and mind set changes for this process to continue to work and be widely accepted.

According to Blanchard, Carlos and Randolph (1996), the traditional management model of the manager in control and employees under control is no longer considered effective or the norm. To create an empowered workplace that fosters participation, management’s role in organizations must move from a command-and-control mind set to a responsibility-oriented and supportive environment in which all employees have the opportunity and the freedom to do their best.

Moving to an empowerment type of atmosphere calls for changes in most aspects of an organization. Managers and employers must grasp, first, not to be bureaucratic and, second, to be empowered. Unfortunately, many managers do not comprehend empowerment involves letting go of the power people already have, nor do they understand how to move toward the journey to empowerment (Blanchard & Carlos, 1996).

Pearce (1995) contended that if you have taught someone well and turned over complete authority and responsibility, you will feel some anxiety and loss. There is also a sense of insecurity, some anxiety that the job will not get done properly.

Blanchard, Carlos, and Randolph (1996) stated “empowerment is not ‘giving power to people.’ Rather, it is ‘releasing the knowledge, experience, and motivation they already have.’” (p. 48)

Bennis and Townsend (1995) pointed out that to empower employees and build trust, management needs to let go of some of the control and allow individuals to participate in the decision-making process. Top management must also be patient in this venture because if one is not careful to take a moment to think this process through before implementing it, mistakes are bound to be made and will often result in failure.

Decentralization would flatten an organization by removing layers to accomplish the above system where individuals would feel empowered and motivated in today’s atmosphere. Management would also be empowered by concentrating more on those functions that they would need for the organization to move forward as a whole.

Bennis and Townsend (1995) reported that good leaders and good followers have many of the same traits. The single most important characteristic of a follower may be a willingness to speak out and tell the truth, which is precisely the kind of initiative that makes good leadership. And when a leader creates an atmosphere in which employees feel free to offer contrary views and speak the truth, an empowered work force is created. Given the power to do what they do best, these motivated individuals serve as vital allies in transforming the organization.

Becker and Steele (1995) believed that involvement of employees in the decision-making process is very important if one is to be successful in large businesses, especially in this day and age. Employees should be given responsibility and authority that are meaningful in many areas of decision making. Employees are, thus, given some

ownership around the product(s) being produced or service being provided. This can range from empowering a first-line supervisor to make his or her own decision about how much to award an employee for a job well done, to resolving an angry student's problem (without needing approval from the manager). It may also result in getting the staff involved in decisions about planning and design of the workplace itself. Becker and Steele believed that allowing employees to participate in the decision-making process produces both better solutions and more commitment to implementing them. The unusual thing for many managers to realize is that by involving employees in the decisions, they do not necessarily increase, and may even reduce, the length of time it takes to complete a project. The reason for this is decisions are not as likely to be revisited again, causing expensive modifications and redesign. The authority must be real to eliminate the mind set that one is just going through the motions.

According to Joe DelBalso, Director of Eastern Region, the FAA for a number of years has had an Employee Involvement (EI) Program in place throughout its nine regions in its AF organizations, which has stressed the importance of employees' involvement in the decision-making processes. This action is still working in all of the regions and is believed to have made a difference in bringing employees and management closer together. The workplace environments have definitely gotten better as a result of employees' involvement, and both management and employees continue to work together in this process to make further improvements.

Bennis and Townsend (1995) reported that in a successful work environment that is stimulating and emerging, people are empowered to work better and to achieve more. Leaders help followers to lead themselves.

Employee participation in the decision-making process is an attractive idea, especially from the perspective of societal values (Lawler, 1986). A need exists to observe values separately as well as organizational effectiveness. Participation affects five major determinants of organizational effectiveness: Motivation, satisfaction, acceptance of change, problem solving, and communication. Participative management has been found to be appropriate for the work force of today, especially with the advances in new technologies and with the mind set of today's society more so than any other choice. In addition, there is reason to believe it can produce improvement in areas where it is desperately needed or required, such as the quality of products and the cost of labor. This is especially encouraging because it offers the possibility of further increases in organizational effectiveness and employee welfare as we learn more about how to manage in a participative manner.

Weber (1999) explained people believe face-to-face communication and leadership involvement are crucial to any organization success. Direct communication from top management is imperative throughout the organization in regard to tough issues. According to Weber (1999), organizations like the FAA with multiple locations (regions) should find it necessary to encourage their leaders to go on the road to communicate directly with staff as much as possible. The road visits provide people who work outside of the headquarters organizations an opportunity to interact with top leaders and feel more part of the organizational structure.

McLagan and Nel (1995) pointed out that all over the world people are speaking out against processes that are of an authoritative nature. People want to maintain or regain their human rights and, therefore, will not tolerate anything that will deny them the

freedom to participate in the decision-making process. Many teams and total-quality programs have been established because companies are realizing and recognizing that to retain the status quo can hinder new ideas and competitiveness. Some companies are moving in a direction of democratic forums that will foster greater participation.

Unfortunately, many of these initiatives have failed in the public and private sector. To be successful, these programs must continue to be made part of a general movement toward areas that will allow employees to participate in the decision making. This will give employees some ownership of the products and services being produced and possibly improve morale as a result.

Goldhaber (1990) stated that to bring about the type of system mentioned above, management must be willing to let go of much of the control and decentralize many of the functions that may be performed at the lower levels. A process must be developed which would be conducive to allowing the workforce to participate in the decision-making process. This process should not be one with a tall structure, but one with a flat structure where individuals would be empowered and allowed some ownership in the products being produced.

Leaders have a significant role in creating the state of mind that is the society. They can serve as symbols of the moral unity of the society. They can express the values that hold the society together. Most important, they can conceive and articulate goals that lift people out of their petty preoccupation, carry them above the conflicts that tear a society apart, and unite them in the pursuit of objectives worthy of their best efforts. (Bennis & Nanus, 1985, p. 215)

Bennis and Nanus (1985) pointed out that in every organization someone who can take on the leadership role is required to be successful as a group or as an organization.

Uniting a group will definitely add value to any group or organization. Where good

leadership exists, organization morale will often increase, and employees will be more supportive as a result. Bennis and Nanus reported that organizational goals are equally important, and a leader must be able to communicate these goals to his or her employees so that the focus can be “in sync” and expectations clear. A good leader needs to provide not only the initial motivation for a project, but the continued encouragement necessary to keep the project going. A leader must find his or her own dependable source of encouragement. Finally, a good leader is one who does not treat all people the same but treats them fairly because he or she realizes people are not the same. Therefore, one has to be a good leader when he or she responds to various situations accordingly and assesses the performance of others while taking the responsibility for making things happen.

Conger and Kanungo (1988) reported that organizations bolster employee self-efficacy perception. Collectively, these efforts lead to empowering experiences for employees that will increase employee persistence and independence.

According to Thompson, Bailey and Farmer (1998), empowered employees are desired by many private and public organizations including the FAA. Empowerment is sought, not for its own sake, but because empowered employees are believed to contribute more effectively to organizational success (Quinn & Spreitzer, 1997).

Thompson, Bailey and Farmer (1998) reported that to obtain empowerment, the organization must identify and eliminate context factors that are disempowering. Next, the organization must utilize managerial techniques that can improve an employee's belief in his or her ability to be empowered, such as effective goal setting, performance feedback, and making rewards contingent upon performance.

Wellins, Byham, and Wilson (1991) reported that an organization empowers its people when it enable employees to take on more responsibility and to make use of what they know and can learn. Wellins, Byham, and Wilson stated that for some positions, there is no limit to the amount of empowerment that is possible through increases in job responsibilities. This is especially true in many professional and managerial positions. In such cases, the degree of empowerment is directly proportional to the amount of responsibility. Increasing responsibilities yield corresponding amounts of empowerment.

Davidow and Malone (1992) pointed out that hierarchical management systems were developed to provide control over the railroads. The hierarchy served as an information network within which data were gathered and summarized. Results were fed up the management chain so decisions could be carried out. Davidow and Malone believed that it was a management technique ideally suited to an era when distant communications were difficult and computers did not exist.

Davidow and Malone (1992) reported that a well-trained employee dealing directly with the situation can now make the decision faster and in a more responsive fashion than the remote manager miles away. Anyone restructuring a company that does not take this new employee empowerment serious is not dealing with the future but is merely streamlining the past.

Davidow and Malone (1992) reported that if indeed what we consider modern business organization is a thing of the past, and our organizational and managerial concepts are a century old, streamlining the processes and dressing the operation in today jargon will end up short, our strategies anachronistic, and malignant.

According to Peters (1994), every employee should be a businessperson. They should be able to go anywhere, find anyone, and break any box to get the job done fast and well in an empowered environment.

Byham and Cox (1988) reported that empowerment is the answer, and it is easier to achieve than you may think. Byham points out that empowerment start by encouraging responsibility, acknowledgment, and creativity so that employees feel that they “own” their jobs.

Sashkin and Kiser (1993) contended that employees responsible for doing the work and attaining certain outcomes must have the authority they need to carry out their responsibilities effectively.

Tubbs (1995) reported that more and more organizations are moving toward greater teamwork and empowerment in all-out attempts to remain competitive in today’s global economy. According to Tubbs, future jobs and career will no doubt be dramatically impacted by this national trend.

Osborne and Gaebler (1993) pointed out that in today’s world, things simply work better if those working in public organizations—schools, public housing developments, parks, training programs—have the authority to make many of their own decisions.

Government Executive Magazine (1998) pointed out that workers must stop merely following orders and begin making decisions and being accountable for results.

Kriegel and Brandt (1997) stated that people are the gatekeepers of change, with the power to breathe life into a new program or kill it. If they are excited and positive, it is open sesame; if they are resistant, they will slam the door in your face.

Blanchard, Carlos, and Randolph (1999) explained that global competition, rapidly changing technologies, and increasingly complex marketplace dynamics make tapping the potential of an organization's workplace imperative. Making the transition from hierarchy to empowerment is not an easy process according to Blanchard, Carlos, and Randolph. They contend that in an empowered environment, employees can experience a new sense of ownership, excitement, and pride in their work, while managers will see levels of achievement not possible using more traditional approaches.

Jones (1995) explained that the world is changing, and the leaders who succeed will be the ones who can marshal their most powerful resources—human intelligence and energy—in the most effective ways. Jones argues that by harnessing the three categories of strengths behind Jesus' leadership techniques (the strength of self-mastery, the strength of action, and the strength of relationship), each of us can become empowered leaders.

Blanchard, Carlos, and Randolph (1998) explained that empowerment is not "giving power to people." Rather, it is "releasing the knowledge, experience, and motivation they already have."

Shipper and Manz (1991) explained that words like "self-management" and employee "empowerment" are quickly becoming the contemporary battle cry of American industry. The emphasis has shifted from a focus on management control of employees to a decentralization of power and the provision of opportunity for workers, at all levels, to exercise increasing influence over themselves.

Self-Management

Kolb, Osland, and Rubin (1995), reported that one of the most significant trends in business is the move towards teamwork. According to a recent study, 46% of Fortune 1000 companies are utilizing work teams. Kolb, Osland, and Rubin believed that the impetus for incorporating teams into organizational structures comes from the need for speed and flexibility. Downsizing strategies have eliminated supervisors and middle managers and delegated many of their functions to self-managed or self-directed teams. When they function well, such teams allow their members to make a greater contribution at work and constitute a significant competitive advantage for the organization according to Kolb, Osland, and Rubin. Research shows that self-managed teams were rated as more effective in terms of productivity, costs, customer service, quality and safety than traditionally managed teams.

Drucker (1999) reported that more and more people in the workforce—and most knowledge workers—will have to manage themselves. They will have to place themselves where they can make the greater contribution and they will have to learn to develop themselves. Drucker contended that the knowledge workers will have to stay young and mentally alive during a fifty-year working life. They will have to learn how and when to change what they do, how they do it and when they do it.

Drucker (1999) believed that knowledge workers are likely to outlive their employing organization. He pointed out that even if knowledge workers postpone entry into the labor force as long as possible—if, for instance, they stay in school till their late twenties to get a doctorate—they are likely, with present life expectancies in the

developed countries, to live into their eighties. Most will have to keep working into their late seventies even if it is only for part time. Drucker predicted the average working life to be around 50 years. He pointed out that even organizations that normally are long-lived, will not live that long such as schools and universities, hospitals, government agencies—will see rapid changes in the period of turbulence we have already entered. Even if they survive—and many surely will not, at least not in their present form. Drucker contended that they will transform their structure, the work they are performing, the knowledge they require and the kind of people they employ. Knowledge workers will outlive employers, and will have to be prepared to take on multiple tasks, more than one assignment, and more than one career.

Peters (1992) believed:

To sign up for true decentralization, then, is to celebrate invisibility. It's well worth celebrating. The seldom-sung characteristics of the truly decentralized, largely invisible-from-the-top unit summarized here adds up to an impressive endorsement for letting go (and endorsement for smaller than-traditional scale).

When you're close to the scene, unimpeded by a cumbersome superstructure, and getting in youricks, you hear more quickly about whether an idea—new product, new technique—works. You can adjust faster, toss out useless schemes faster, and improve faster. Market economies perform well because feedback loops are relatively short, and undistorted signals (more timely, closer to the action) rapidly inform a large number of people that they are on the money, off the money, or halfway in between—in any event, giving impetus for an immediate next adjustment/try. The magic in the genuinely decentralized unit is the same.

It is clear that marketplace victories do not always, or perhaps even often, go to those who deserve it. Instead, victory goes to those who happen to be in the right place at the right time. True decentralization simply maximizes the odds of a firm's getting lucky, by putting lots of energetic, empowered people in the market's way. (pp. 565-568)

Peters (1992) reported that giving up some of the responsibilities to the employees and allowing them to participate in the decision-making process is very worthwhile, as many that have experienced this can attest. Top management must relinquish some of its power and authority to its subordinates if it is to survive and focus more on its clients. Empowerment is something that we can truly celebrate for it has been a long time coming. Now that employees are empowered, it is hoped all involved will benefit from being allowed to participate in the decision-making process, management and employees, as well as the customers who are the most important entity.

Peters (1992) stated:

The message is clear: (1) trust, (2) "they" can handle "it" (whatever "it" is), (3) you're only in control when you're out of control ("head" of a flat, radically decentralized "organization"). (p. 759)

According to Peters (1994), for sizable corporations, the answer is a lightly linked structure similar to that of Johnson & Johnson's. Self-assured leaders who celebrate doing their own thing and thumbing their noses at their bosses must captain liberated units.

Ritvo, Litwin, and Butler (1995) reported that work teams are often expected to be self-managing, self-regulating, or self-directed. The degree to which they are, and how these qualities are developed, is a critical issue in the changing work environment according to Ritvo, Litwin, and Butler. Self-directed applies to the whole team, including the leader. It does not mean that the team is leaderless, but is interpreted this way in some organizations. Some form of leadership is usually required such as facilitative. The traditional top-down approach is not preferred in this case. This process requires a change from older models of supervisory leadership.

Harper and Harper (1992) reported that self-directed or self-managing work teams have produced impressive improvements in quality, productivity, and customer service in both manufacturing and service industries.

Harper and Harper (1992) pointed out that the only thing new about self-directed work teams today is the strong commitment on the part of American management who have traditionally resisted employee involvement programs. Harper and Harper contended that self-directed employees have been known to produce results but management was not comfortable with this process because it meant changes from the norm.

Harper and Harper (1992) reported that self-directed teams have produced impressive improvement in quality, productivity, and customer service in both manufacturing and service industries. Harper and Harper contended that what is new about the idea is the seemingly strong commitment behind self-directed work teams is today on the part of American management who have traditionally resisted employee involvement programs even though they produced results because this meant making changes management was not comfortable with.

Odiorne (1979) argued that if managers are to loosen personal control over people doing their work, they must move toward an even better form of control—self-control. Self-control requires that responsible people make commitments in advance to the boss, customers, colleagues, or government officials according to Odiorne. In a self-control environment, employees should be held accountable for delivering the commitments they have made. Odiorne pointed out that to get people to internalize those commitments

means that people must have a thorough understanding and acceptance of the situation and the task.

According to Ouchi (1981), self-direction replaces hierarchical direction to a great extent which enhances commitment, loyalty, and motivation.

Purser and Cabana (1998) reported that the disappointing results achieved by reengineering, total quality management, and team-based empowerment programs dictate that a quantum change is needed in the way organizations are designed and managed. Purser and Cabana argued that innovative companies are unleashing huge productivity gains by transforming the work of teams, designing them into a fully self-managing organization. Purser and Cabana believed that authorizing employees to design, control, and coordinate their own work and workplace has enabled some firms to reduce manufacturing cycle times by 50 percent, cut costs in half, and most important, share knowledge more widely in the organization. Democratic decision-making works today in such pioneering companies as Microsoft, Motorola, Lockheed Martin, American Express, Charles Schwab, Sequa Chemicals, Syncrude Canada, and Celgard according to Purser and Cabana.

Manz and Sims (1995) contended that self-managing teams provide a way for companies to increase productivity and quality and are an important aspect of the competitiveness challenge.

Change and Curtain (1994) argued that making the transition from a traditionally managed department or work group to a self-managed team is not an easy task. Organizations will benefit from knowing how to successfully plan, organize, and implement the transition to a self-managed team.

Barry (1992) stated that the use of self-managed teams (SMTs) in work settings not only has gained momentum but appears to be at a record high.

Kochanski (1987) believed that the concept of organizing employees into teams having responsibility for many aspects of a production operation has grown stubbornly over the past two decades. These self-regulating, self-managing, semiautonomous, or self-governing teams typically have responsibilities for such areas as output, quality, maintenance, hiring, evaluation, and discipline. According to Kochanski the potential benefits of the team concept, including work-force commitment, high output, high efficiency, and lower costs—benefits that have often proved to be real—have led many firms to consider self-managed operations.

Manz, Keating, and Donnellon (1990) reported that work designs based on self-managed teams tend to give workers a high degree of autonomy and control over their immediate behavior.

Graham, Wedman, and Garvin-Kester (1994) reported that in today's work environment there is less emphasis on the rigid, hierarchical system of management and more focus on empowered work groups. As companies compete with a constantly changing organizational structures, they have attempted to define new roles for their workers and managers. Graham, Wedman, and Garvin-Kester stated that as organizations are confronted with the demands for new ways to cut costs, they are attempting to develop more self-managed teams to improve worker performance.

Kelman (2000) reported that leaders seeking change should put less priority on studies, plans and recommendations, and more on getting people to test new ways of working.

Progress in Streamlining Management Control Positions

One of the main purposes of the 1993 report of the NPR was to reduce the size of government by eliminating micromanagement-oversized headquarters and the many layers of management. All of these initiatives were established to create a government that would cost less and operate more efficiently. Many functions were to be streamlined and decentralized to empower people at the lowest possible levels. Putting people first would give them more ownership of the product being produced. People are our most important resource and, if given the right tools and a chance to succeed by making them part of the decision-making process, this would definitely strengthen our country and make us more competitive (Gore, 1996).

Gore (1996) reported goals are important because employees cannot be empowered to provide service to their customers without removing the obstacles that bind their hands. So the goal of reduction in the workforce, especially the reduction of management control positions, is not only to save money, but also to improve the working conditions and environment for front-line federal workers. This will especially enable those who serve the public to speed up the flow of information between top administrators and front-line workers by reducing decision-making bottlenecks.

According to Koskinen (1996), the National Performance Review (NPR) was launched in response to perceived public sentiments that the Executive Branch of the federal government is too big and too costly. Koskinen reported that the federal government is proportionately smaller and more efficient than other government entities

at the state and local level. Koskinen pointed out that like the private sector, the federal government is reevaluating the way it operates.

According to the FAA Academy directive, the AF division went through the process of flattening its organization by decreasing its layers of management as a result of the NPR initiatives. It went from four to just two layers. The employee-to-supervisor ratio went from 10-to-1, to about 18-to-1 originally in September of 1995; and to date, the AF Division is still above the 1999 recommendation of 15-to-1 employee-to-supervisor ratio. The results of the initial change in reference to the AF Division re-organization were ten branch managers and one division manager. The managers who were affected by this re-organization became team coordinators and maintained their previous pay grades. Many of the division functions were decentralized to the teams, and employees were empowered to a small extent. A large amount of work remains to be done to further empower people and streamline functions (Gore, 1996).

Decentralization is a process that could definitely flatten an organization and get more people involved in the decision-making process and may improve organizational morale if correctly orchestrated.

Huse and Bowditch (1973) reported that theorists have been concerned with whether an organization should be centralized or decentralized, set up by product or function, etc. Since the concept of division of labor extends from the top to the bottom of the organization, it may appear to be overly "formalistic" to spell out exact job descriptions and positional interrelationships, but it is necessary for total efficiency.

Hagstron (1999) pointed out that Vice President Al Gore's National Performance Review (NPR) intended to eliminate unnecessary levels of middle management with its

downsizing initiative. Hagstron reported that statistics from the Office of Personnel Management (OPM) revealed that clerical workers made up 20.5 percent of the 14.4 percent federal workforce reduction between 1993 and 1997.

Hagstron (1999) explained that the directions of the NPR to reduce headquarters staffs did not advise agencies to eliminate secretaries only. According to Hagstron, theorists at NPR now known as the National Partnership for Reinventing Government, believe that even with cuts in clerical staff, 24-hour-a-day voice mail has improved citizens' ability to contact the government. Hagstron reported that an OPM spokesperson says cuts in clerical positions were appropriate because voice mail, e-mail and computerization have reduced the need for such personnel.

Huse and Bowditch (1973) pointed out that division of labor is essential to the proper functioning of a large, complex organization; unity of action for achieving organization goals can be achieved only through proper coordination.

Goetsch and Davis (1997) believed that the strategy of streamlining a process is to remove the unnecessary steps. After a process has been streamlined, every step in it has significance, contributes to the desired state, and adds value. Goetsch and Davis contended that the strategy of eliminating errors in the streamlining process involves identifying errors that are commonly made in the operation of the process and then eliminating them. This strategy helps eliminate steps, procedures, and practices that are being done a certain way simply because that is the way that they have always been done.

Harbour (1996) argued that the need for economies of speed is rapidly reshaping how we work. Speed is the new competitive dimension. Harbour reported that designing and streamlining work for high performance gives organizations in all sectors and

industries practical help by addressing the real issues that challenge managers and others daily. Harbour pointed out that eliminating process waste, making the right resources available at the right place and right time, optimizing technology to improve process flow, achieving continuous flow and creating and sustaining cross-functional work teams are the issues that presents these challenges to manager.

Summary

All organizations need some form of structure, horizontal and vertical, to become distinguishable and for coordination of the work to be done. Structure provides a process for reporting relationships within an organization. This structure involves formal channels of communication, be it vertical or horizontal, a determination of task responsibility which comes through identifying and making known the expectations, and the delegation of decision-making authority to allow employees the opportunity to participate in the process. The environment of the organization has a major influence on the structure. If the morale of people in the workforce is to be one of a positive nature, then the atmosphere must be conducive to aiding it.

The literature points out that no one size fits all. Just because centralization or decentralization, or a combination of the two, has worked in a particular organization, it does not mean it will or will not work in others. One must also realize certain areas within an organization exist where a combination of both, or the use of one or the other depending on the size and make-up of the organization, may be the key to success. For example, areas such as accounting and training may work best in a centralized process rather than a decentralized process. Although many of the small organizations may

possess their own small accounting firm within their organization for tracking purposes, they often feed into a centralized accounting system. There FAA utilize several of these systems, like the Data Accounting Financial Information System (DAFIS), Centralized Training Travel Management System (CTTMS), Cost Accounting System (CAS), Activity Data Tracking System (ADTS), and Activity Based Costing (ABC) at the FAA MMAC.

Another good example is the technical training within the FAA Academy is centralized and for good reasons. Much of this training is very specialized and is also continuous, which would probably be very expensive if taught by a vendor year in and year out. With live systems in the field, training would present a problem when it comes to hands-on training because this would involve tampering with a system that controls live air traffic. Standardization of training is also a key factor which must be considered.

CHAPTER III

METHODOLOGY

This chapter presented the purpose for the research, population, hypotheses, research questions, sample, instrumentation, pilot study, procedures for gathering data, data analysis technique, and summary.

Purpose of the Study

The purpose of this study was to describe the advantages and disadvantages of straight-line and nonstraight-line organizations at the Mike Monroney Aeronautical Center FAA Academy. This study distinguishes between the two processes and emphasizes the advantages and disadvantages of straight-line and nonstraight-line organizations within the FAA. Quantitative and qualitative research methodologies were used. To achieve the purpose of this study, interviews were conducted with managers from both straight-line and nonstraight-line organizations at MMAC and the FAA Academy. A questionnaire consisting of 23 questions was developed and administered to a sample population of Airway Facilities managers at the Aeronautical Center, the Regions, and Headquarters. The reason for focusing primarily on individuals from the FAA is because of their experience in straight-lined and nonstraight-lined organizations. The primary purpose of the AF Division at the FAA Academy is to provide technical

training, primarily to the AF population, which has the responsibility for the continued reliability of the National Airspace System (NAS).

This chapter outlines the methodology used in the study and present information on the population and samples involved in the study, instrument description, instrument development, instrument reliability and content validity, procedures for gathering data, techniques of data analysis, limitations of the study, and summary.

Population

The AF field organization consists of nine regions, which have 33 sector managers, nine division managers, nine assistant division managers, and nine regional administrators, resulting in a total of 60 possible candidates to sample. The nine AF divisions in the regions were straight-lined in 1988. The population also includes the program director and the assistant program director of the FAA Academy along with the AF Division within the Academy, which consists of one division manager and an assistant division manager, and 10 branch managers. The director and the assistant director of the Aeronautical Center brought the total population to 76. Headquarters personnel were also included in this research study such as the Program Director of AF and the assistant (AAF-1), Resource Management (AFZ-1) and assistant, NAS Implementation (ANI-1) and assistant, NAS Transition and Integration (ANS-1) and assistant, NAS Operation (AOP-1) and assistant, Operational Support (AOS-1) and assistant, Spectrum Policy and Management (ASR-1) and assistant, and AFZ-100 and assistant, for a grand total of 92 possible survey candidates. According to Weirsmas (2000), probability sampling procedures that include some form of random selection are

not always appropriate or desirable. Weirsmas (2000) reported that when random sampling is not used, the researcher selects a sample to meet the purpose of the research, called a purposeful sample. The logic of the purposeful sampling is based on a sample of information-rich cases that is studied in depth. There is no assumption that all members of the population are equivalent data sources, but those selected are believed to be information-rich cases according to Weirsmas (2000). To be selected, the participants must have had at least five years of managerial experience, be familiar with the training delivery process at the FAA Academy, be familiar with the FAA budget process, and be familiar with the past and present FAA structure. Additionally, participants must have visited or attended the FAA Academy at least one time during their career. The study represented a cross section of managers from Headquarters, field, and the Mike Monroney Aeronautical Center. Therefore, 74 people represented the sample.

Hypotheses

1. If given a choice, most managers in the Airway Facilities Divisions including the AF division at the FAA Academy would prefer a straight-lined organization to a nonstraight-lined organization.
2. Straight-lined organizations would improve efficiency more than non-straight-lined organizations.
3. Most managers would like to see their employees participate in the decision-making process regardless of the organizational structure.

Research Questions

1. How are the training roles and responsibilities in a straight-lined organization and nonstraight-lined organization at the FAA Academy defined?
2. How are tasks accomplished in straight-lined organizations compared to those in nonstraight-lined organizations?
3. Does an organization operate more efficiently if it is straight-lined or nonstraight-lined?
4. Does straight-lining have an impact on work processes, social structure, employee innovations, and communication?

Sample

For the purposes of this study, purposeful sampling was used. According to Isaac and Michael (1997), purposeful sampling is a method of data sampling that is particularly appropriate for research which occurred in a natural setting and is used in order to capture central contributing themes or principal outcomes.

This study purposefully sought to use mainly those individuals from Airway Facilities Organizations for analysis purposes. The subjects of this study were all participants from Headquarters, the nine regions, and MMAC. The participants are located throughout the United States. They all represent the FAA in providing a safe National Airspace System for the flying public. They met the criteria of selection as established. The criteria are listed in the information regarding the population of this

study. The FAA Organizational Directory has a list of all the managers and their respective office locations. Therefore, their addresses were accessible by the researcher, thus enabling the study to be conducted.

Instrumentation

According to Rossett (1987), the questionnaire or survey is an excellent device for acquiring information. The survey and the interview were the sources of data for this study. The survey and the interview instruments were developed to gather data regarding the research questions. A consideration in constructing a survey is its validity. Badia and Runyon (1982) defined validity as whether the measuring instrument does what it is intended to do. Therefore, a panel of experts was assembled to validate the survey and interview questions. The panel of experts included the Chairman and members of the researcher's doctoral advisory committee, an Education Specialist at the FAA Academy, professors, and classmates at Oklahoma State University. The panel of experts reviewed the survey and interview questions to determine validity. Revisions were made based on recommendations and suggestions. The survey and interview were approved by the Oklahoma State University Institutional Review Board (see Appendix B).

The survey and interview instruments were designed to determine the advantages and disadvantages of straight-lined and nonstraight-lined organizations at the FAA Academy. The survey contained 23 items and the interview contained eight questions. Most of the items in the survey consisted of organizational structure information. Several of the items consisted of specific information regarding advantages and disadvantages of

straight-lined and nonstraight-lined organizations. Items also consisted of employee participation information.

Pilot Study

The survey instrument was piloted with ten branch managers who are part of the AF training division at the FAA Academy. A list of the FAA managers who served as participants can be obtained from the FAA Organizational Directory.

The surveys were distributed by mail during May 1999. The mail packet included: (1) a cover letter which explained the purpose of the survey and other pertinent information, (2) a copy of the survey, (3) an addressed and stamped return envelope, and (4) a postcard. Personal information, such as name or social security number, was not requested on the survey to ensure candidate anonymity.

The pilot participants were asked to complete and return the surveys in the addressed and stamped envelope provided. After two weeks, the pilot participants were sent a carbon copied mail (cc: mail) message as a reminder for them to complete and return the survey, if they had not done so already.

Envelopes, which contained the surveys, were not opened until after the deadline date. As they were opened the surveys were placed in a closed box. No survey responses were read until all the envelopes had been destroyed. Therefore, anonymity was ensured. The information from the pilot survey was used to make further revisions to the survey instrument.

Procedures for Gathering Data

Conversations with colleagues were recorded and later incorporated into the research. Interviews were scheduled during and after business hours in a setting that was nonthreatening and was conducive to gathering accurate and pertinent information.

Prior to sending out the questionnaires to the desired audience, requests were sent to the administrative head of the various organizations requesting their participation in this process. Prior to mailing the questionnaire, a preliminary card asking whether or not the individual would be willing to participate in the proposed study was sent. The gathering of the data was made convenient by including a self-addressed, stamped envelope, and a carefully constructed cover letter to explain the purpose of the study and to give instructions for completing it. A carbon copied mail (cc: mail) message was also sent to all the participants prior to mailing out the questionnaire, making them aware of its purpose.

Data Analysis Technique

The results of the responses to the survey were presented using descriptive statistics. Percentages were reported for analysis of research questions. As interviews were completed, they were reviewed and analyzed immediately by listening to tapes and reading the written data. Following a listening analysis, tapes were transcribed into electronic media, Microsoft Word for Windows (7.0), and formatted. Each participant's response was reviewed and responses for each of the questions were totaled so that

percentages could be calculated. With the data in an electronic format, the search function grouped those responses that were similar and those that were different. The responses were tabulated by adding all of the *strongly agrees*, *somewhat agrees*, *don't know*, *disagrees*, *strongly disagrees*, *not applicable*, and *yes* and *no* responses.

The percentage of responses received was calculated to determine the overall return rate. The researcher was anticipating approximately an 80% return and received a 91.89% return, which was considered to be outstanding. The researcher projected a high percentage due to the excitement displayed by many of the participants when originally asked to participate in this exercise. Percentage of *strongly agrees* versus *strongly disagrees* in each organization was calculated for each question, and the percentage of *don't know* responses in each organization was calculated to determine the amount of awareness. The percentage of *agrees* versus *disagrees*, and *yes* versus *no* in each organization was also calculated for each question. One question with *better*, *worse*, and *no change* as a possible response was also part of the questionnaire. All of the questions were evaluated from a percentage standpoint because the researcher sought to determine which organizational structure the participants favored. Once the calculation was performed in each organization, an overall percentage for all possible responses was calculated.

Summary

In summary, this chapter provided a general description of the design and methodology of the study. Major areas discussed were descriptions of the population, sample, survey, interviews, and the method of collecting and analyzing the data.

CHAPTER IV

FINDINGS AND DISCUSSION

The first three chapters presented an introduction to the study, a review of the selected literature, and the design and methodology of the study. This chapter presented the data collected and summarizes the results of the analysis of that data.

This study assessed the advantages and disadvantages of straight-line (centralized) and nonstraight-line (decentralized) organizations within the FAA Academy. The results of this study can, through describing the advantages and disadvantages of each process, assist management with making a sound decision regarding which process is the preferred choice or better structure for their organization.

This chapter presented the responses collected and how respondents viewed the straight-line (centralized) and nonstraight-line (decentralized) organizations. This chapter contained the result of the survey conducted in the FAA organizations. The main focus was in the AF organization because it was being considered for the straight-lined process.

Descriptive Statistical Findings

Findings from Survey Questions

A total of 74 people were surveyed, all of whom were managers. Of the 74 managers surveyed, 68 responded (91.89%). The questionnaire contained 23 questions.

Managers were surveyed to determine if they supported or lacked support for the AF Division being straight-lined to Washington headquarters. The survey indicated 37 (55%) of the respondents presently worked in a straight-lined organization, 29 (42%) presently worked in a non-straight-lined organization, and the remaining 2 (3%) worked in some other structure.

According to the survey, 43 (63%) of the respondents reported in their opinion the AF Division at the FAA Academy should be straight-lined, while 14 (21%) reported it should not. A total of 7 (16%) stated they did not know. Based on question 2, 25 (37%) of the respondents believed that the AF Division should be straight-lined to the ATS organization in headquarters, while 29 (42%) believed it should be placed under the AFZ organization in headquarters. The remaining 14 (21%) stated it should be placed under some other organization in headquarters. Another interesting response from the respondents was in reference to question 4. Approximately 43 (63%) of the respondents believed the relationship between the field and the FAA Academy AF Division would be improved if it was straight-lined to headquarters, while 7 (16%) reported it would be worse if that happened. The remaining 14 (21%) stated no change would occur.

Because the delivery of technical training is one of the primary responsibilities of the AF Division, a question was asked in reference to the quality of the provided training. A total of 5 (8%) of the respondents strongly agreed training would be greatly improved if ATS or AFZ controlled it out of the headquarters office. About 18 (27%) strongly disagreed the training would be greatly improved if the above change occurred. Three other possible responses on this question were: 15 (22%) *agree*, 15 (22%) *don't know*, and 14 (21%) *disagree*. (See Figure 5).

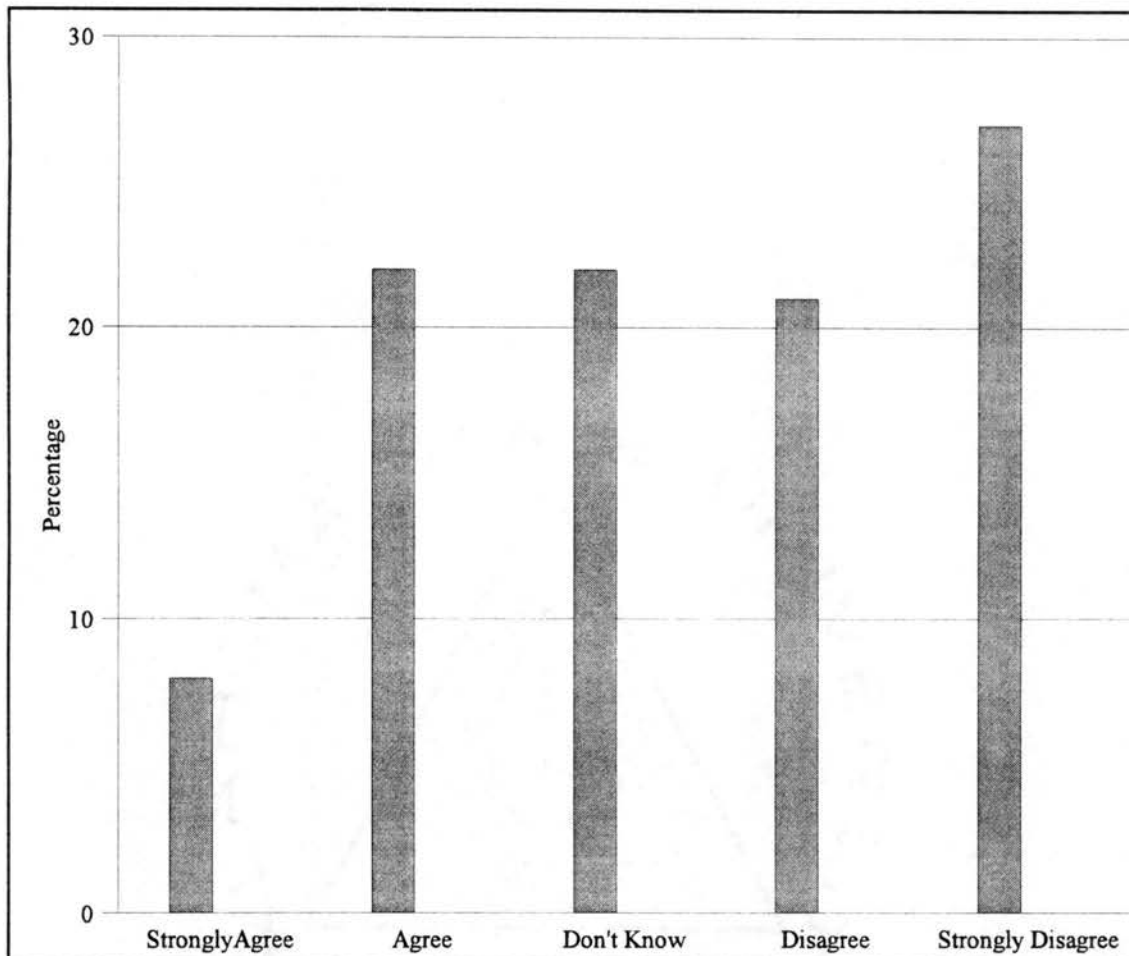


Figure 5. Responses in Percentages to Question 5 – *The Technical Training Provided by the AF Division at the Academy Would Be Greatly Improved If ATS or AFZ Completely Controlled Training out of Headquarters.*

Information obtained from Question 12 revealed the level of empowerment in straight-lined and nonstraight-lined organizations. According to the responses, a total of 13 (19%) strongly agreed the level of empowerment should increase for employees regardless of the organizational structure. A total of 42 (61%) *agreed* and 1 (2%) *strongly disagreed*. The other two possible responses were: 7 (11%) responded *don't know* and 5 (7%) *disagree*. (See Figure 6).

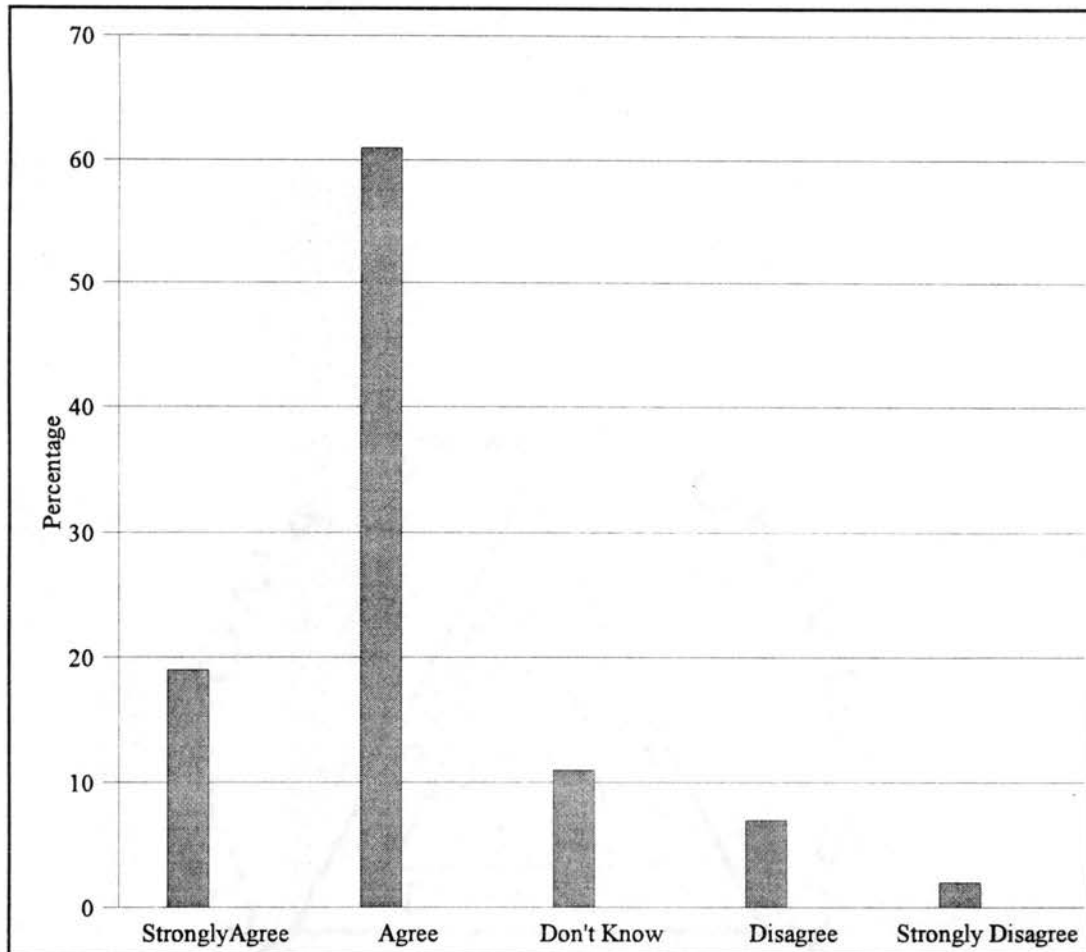


Figure 6. Responses in Percentages to Question 12 – *The Level of Empowerment Should Increase for Employees Regardless of Whether an Organization is Straight-Lined or Nonstraight-Lined.*

Question 1 of the questionnaire stated: “My present organization is.” A total of 37 (55%) of the respondents stated their organization was straight-lined; 29 (42 %) stated nonstraight-lined, and 2 (3%) stated other.

Question 2 asked, “In your opinion, if the Airway Facilities Division at the FAA Academy was to be straight-lined, which organization should it be placed under?” A total of 25 (37%) stated ATS, 29 (42%) stated AFZ, and 14 (21%) stated *other*.

Question 3 asked, "In your opinion, should the AF Division at the FAA Academy be straight-lined to headquarters?" A total of 43 (63%) responded *Yes*, 14 (21%) responded *No*, and 11 (16%) responded *Don't know*. Looking at the wide gap between the *Yes* and *No* answers, it appears most of the people would like to see the AF organization become straight-lined. This is not really a surprise because all of the AF divisions in the field are straight-lined.

Question 4 asked, "What would be the impact on the relationship between the field and the FAA Academy if the AF Division at the Academy became straight-lined to headquarters?" A total of 43 (63%) responded *Better*, 11 (16%) responded *Worse*, and 14 (21%) responded *No change*.

Question 5 stated, "The technical training provided by the AF Division at the Academy would be greatly improved if ATS or AFZ completely controlled training out of headquarters." A total of 6 (8%) responded *Strongly Agree*, 15 (22%) responded *Agree*, 15 (22%) responded *Don't know*, 14 (21%) responded *Disagree*, and 18 (27%) responded *Strongly disagree*. Combining the overall percentage of those who either agree or disagree regardless of the extremes yielded, there was an overall 30% for those who agree training would be greatly improved if ATS or AFZ controlled it out of headquarters. Looking at it from the other extreme, 32 (47%) disagree training would improve if handled by either AFZ or ATS.

Question 6 asked, "Are your employees highly motivated in your present organizational structure?" A total of 39 (58%) answered *Yes*, 19 (28%) responded *No*, and 10 (14%) responded *Don't know*. The results of the survey revealed managers in

each of the organizational structures who stated they had employees who were highly motivated.

Question 7 asked, "Do you find your roles and responsibilities clearer in your present structure than in your previous structure?" A total of 27 (40%) responded *Yes*, 21 (31%) responded *No*, 6 (9%) responded *Don't know*, and 14 (20%) responded *Not applicable*.

Question 8 asked, "In your opinion, do employees feel more secure in the present structure compared to the previous structure?" A total of 20 (30%) responded *Yes*, 23 (33%) responded *No*, 14 (21%) responded *Don't know*, and 11 (16%) responded *Not applicable*.

Question 9 of the survey asked, "Have you found human and fiscal resources easier to acquire in your present organizational structure?" A total of 16 (24%) responded *Yes*, 47 (69%) responded *No*, and the remaining 5 (7%) responded *Don't know*.

Question 10 asked, "Do you feel that lines of communications in the upward, downward, and horizontal directions would improve if your organization were straight-lined?" A total of 27 (40%) responded *Yes*, 14 (21%) responded *No*, 8 (12%) responded *Don't know*, and 19 (27%) responded *Not applicable*.

Question 11 asked, "If straight-lined, has your organization become more efficient, effective, and productive in day-to-day tasks?" A total of 17 (25%) responded *Yes*, 18 (27%) responded *No*, 8 (11%) responded *Don't know*, and 25 (37%) responded *Not applicable*. Based on the responses reported by the respondents, approximately half of those who worked in a straight-lined organization believed their organizations were

more efficient, effective, and productive compared to two thirds of those working in the nonstraight-lined structure.

Question 12 stated, "The level of empowerment should increase for employees regardless of whether an organization is straight-lined or nonstraight-lined." A total of 13 (19%) responded *Strongly agree*, 41 (61%) responded *Agree*, 8 (11%) responded *Don't know*, 5 (7%) responded *Disagree*, and 1 (2%) responded *Strongly disagree*. Combining the *Agrees* and *Disagrees* at both ends of the spectrum, one finds 54 (80%) agree and 6 (9%) disagree. As one can see, the majority of the respondents agree the level of empowerment should increase for employees regardless of how an organization is structured.

Question 13 of the survey asked, "Which structure would cause less confusion in reference to the FAA's mission?" A total of 43 (63%) responded *Straight-lined*, 13 (19%) responded *Nonstraight-lined*, and 12 (18%) responded *Don't know*.

According to question 14, which asked, "If your organization is straight-lined, have you found the flow of information in all directions to be clearer than in your previous structure?" A total of 19 (28%) responded *Yes*, 15 (22%) responded *No*, 7 (11%) responded *Don't know*, and 27 (39 %) responded *Not applicable*.

Question 15 asked, "Do you feel that top management today fears decentralization?" A total of 41 (60%) responded *Yes*, 16 (24%) responded *No*, and 11 (16%) responded *Don't know*.

A total of 46 (67%) responded *Straight-lined*, 15 (22%) responded *Nonstraight-lined*, and 7 (11%) responded *Other*, in answer to question 16, which stated, "Which structure do you prefer?" A large percentage chose the straight-lined.

Question 17 asked, "Should power and control be the major reasons for an organization to be straight-lined?" A total of 4 (6%) responded *Yes*, 61 (90%) responded *No*, and 3 (4%) responded *Don't know*.

Question 18 asked, "If your organization is straight-lined, how long has it been that way?" No one responded *Less than 3 years*, a total of 8 (12%) responded *3-5 years*, 27 (40%) responded *Greater than 5 years*, and 33 (48%) responded *Not applicable*.

A total of 30 (45%) responded *Yes*, 33 (48%) responded *No*, and 5 (7%) responded *Don't know* according to question 19, which stated, "Regardless of your organizational structure, would you like to see the layers of management decreased?"

Question 20 asked, "In either structure, straight-lined or nonstraight-lined, would you like to see all employees become more involved in the decision-making process?" A total of 58 (85%) responded *Yes*, 8 (12%) responded *No*, and 2 (3%) responded *Don't know*.

Question 21 asked, "Do you consider the FAA organizations to be mostly closed organizations with a top-down management style?" A total of 48 (75%) responded *Yes*, 16 (24%) responded *No*, and 4 (6%) responded *Don't know*.

Question 22 asked, "Should the organization that funds the operations of the AF Division at the FAA Academy control the training, fiscal resources?" A total of 39 (57%) responded *Yes*, 16 (24%) responded *No*, and 13 (19%) responded *Don't know*.

Question 23, the final question of the questionnaire, asked, "Have you had previous experience in another type of organizational structure?" A total of 58 (85%) responded *Yes*, 9 (13%) responded *No*, and 1 (2%) responded *Don't know*. The majority

of the respondents reported they had worked in a previous structure and this enhanced the credibility of the target audience.

Findings from Interview Questions

A face-to-face interview was also conducted that included ten candidates that participated in the process. The interview consisted of eight questions. In cases where the interview and survey questions were similar, responses were also found to be similar. Question 1 of the interview asked, "What is the present structure of your organization?" A total of 5 (50%) responded *Straight-lined*, 4 (40%) responded *Nonstraight-lined*, and 1 (10%) responded *Other*.

Question 2 asked, "How long has your organization been in its present structure?" A total of 9 (90%) responded *Greater than 5 years* and 1 (10%) responded *less than 3 to 5 years*. In comparison to the conducted survey, there was a greater percentage of the respondents who had greater than 5 years tenure in their present structure than in the interview process.

Question 3 asked, "Identify two advantages and disadvantages of straight-lined organizations." The advantages according to 8 (80%) of the respondents were:

- It brings the parent organization in and gives it a first hand view of its business;
- There is no middle person involved;
- The manager/unit work directly with core sponsor;
- There is a direct line to parent organization;

- There is more control within the organization regarding organizational operations, planning, and resources; and
- The manager/unit is closer to the customers.

Some of the disadvantages according to the majority 7 (70%) of respondents were:

- Requires a parent organization to acquire more resources to handle its own business;
- No middle person to speak to headquarters as an intermediary on training issues/concerns;
- More responsibilities and tasks need to be performed within the organization;
- Requires more resources and funding that may not be forthcoming;
- More union issues.

Question 4 of the interview asked, “Do you consider the benefits of a straight-lined organization to be greater than those of a nonstraight-lined organization? If so why?” A total of 9 (90%) responded *Yes*, and 1 (10%) responded *No*. Those respondents who answered *Yes* referred to the advantages listed above.

Question 5 asked, “In reference to human and fiscal resources, do you find it easier to acquire either in your present structure?” A total of 6 (60%) responded *No*, and 4 (40%) responded *Yes*. This interview response is similar to the survey response because in both the majority of the respondents stated resources were hard to acquire regardless of the structure.

Question 6 asked, “If straight-lined do you find it easier to communicate to upper management at the headquarters level?” A total of 10 (100%) of those belonging to a

straight-lined organization responded *Yes*. Most of the respondents stated this was because of their direct line to the parent organization.

Question 7 asked, “Do you see straight-lining an organization as flattening an organization or making it taller?” A total of 5 (50%) responded *Flattening*, and 5 (50%) responded *Taller*. One response included an explanation: “It depends on your perspective; from within the organization it would seem like flattening; however, if you view it from within the line of business, it would appear taller.”

Question 8 asked, “Do you see straight-lining an organization the same as centralization?” A total of 7 (70%) responded *Yes*, and 3 (30%) responded *No*.

Discussion of Research Questions and Hypotheses

Research Question One

How Are Training Role and Responsibilities in a Straight-Lined Organization and Nonstraight-Lined Organization at the FAA Academy Defined?

Supporting data for this question can be found in FAA Order 3000.10 Airway Facilities Maintenance Technical Training Program Handbook. This order provides supplementary training program guidelines and procedures for implementing the technical training program for the AF technical work force. Another FAA Order 3000.6 Training Manual establishes the policy, procedures, and responsibilities for the planning, analysis, design, development, delivery, evaluation, and management of training in the FAA. Roles and responsibilities have been expanded to include all FAA organizations

with responsibilities for training, thus establishing greater accountability for training activities according to FAA Order 3000.6.

Supporting data for this question were presented in Chapter II. Ghoshal and Barlett (1997) reported that an organization is more than just an economic entity composed of a hierarchy of tasks and responsibilities. Above all else, it is a social institution, made up of people and defined by their roles and relationships. Individualized corporation differs in its fundamental philosophy from that of the traditional divisionalized organization.

Bolman and Deal (1991) pointed out that organizations in more uncertain, turbulent, and rapidly changing environments will develop more sophisticated architectural forms. New specialties and roles are required to deal with emerging problems according to Bolman and Deal. A more specialized and diversified role structure requires more elaborate, flexible approaches to vertical and lateral coordination. Bolman and Deal points out that the effectiveness of an organization is therefore contingent on how well its structure matches or can deal with the demands of the environment.

Drucker (1974) reported that managers may still resist delegating responsibility to workers because a responsible work force does indeed make very high demands on managers. To require responsibility of others without requiring it of oneself is useless and irresponsible. People expect and demand managers enable them to do a good job and work productively and intelligently.

Other supporting data for this question are presented in the finding under survey question number seven which asked, “Do you find your roles and responsibilities clearer in your present structure than in your previous structure?” A total of 27 (40%) responded *Yes*, 21 (31%) responded *No*, 6 (9%) responded *Don't know*, and 14 (20%) responded *Not applicable*.

Research Question Two

How Are Tasks Accomplished in Straight-Lined Organizations Compared to Those in Nonstraight-Lined Organizations?

Supporting data for this question were presented in Chapter II. Drucker (1993) explained that it is the nature of the task that determines the culture of an organization, rather than the community in which that task is being performed. Drucker stated that each organization's value system is determined by its task. Every hospital in the world, every school in the world, every business in the world has to believe that what it is doing is an essential contribution to its community and society—the contribution on which all the others in the community depend in the last analysis. Drucker pointed out that for a task to be performed successfully, it has to be organized and managed the same way.

Hodge and Anthony (1991) contended that equating authority with task completion is similar to the concept that authority equal responsibility. This concept holds that the level of the organization responsible for completion of a set of tasks should have enough authority to make decisions to ensure task completion. Drucker (1974) reported that people are much more productive and responsible when they have the

support of management and the perception that management is competent. When employees have trust in the organization and in management, it creates an atmosphere that plays a major role in how tasks are accomplished. According to Drucker, individuals believe they will obtain the resources they need to perform their jobs successfully.

Decentralization makes top management stronger, more effective and more capable of performing its own tasks because those managers had more time to focus on those tasks that needed their attention by empowering their people (Drucker, 1974). Drucker also pointed out that Japanese managers, IBM, and Zeiss had all learned management became more effective when it empowered employees to perform the tasks they could.

Research Question Three

Does an Organization Operate More Efficiently If it Is Straight-Lined or Nonstraight-Lined?

Hampton (1994) reported that a decentralized orientation typically has effectiveness and flexibility advantages; centralized orientations often have efficiency advantages. According to Koch and Godden (1996), management must be willing to step out on the limb and give up some of its authority. This would allow businesses to involve others in the workplace in the decision-making process and improve efficiency by getting the right person to do the job right.

Huse and Bowditch (1973) reported that theorist have been concerned with whether an organization should be centralized or decentralized, set up by product or function, etc. Since the concept of division of labor extends from the top to the bottom of

the organization, it may appear to be overly “formalistic” to spell out exact job description and positional interrelationships, but it is necessary for total efficiency.

Based on data found in the finding under survey question number eleven which asked, “If straight-lined, has your organization become more efficient, effective, and productive in day-to-day tasks?” A total of 17 (25%) responded *Yes*, 18 (27%) responded *No*, 8 (11%) responded *Don’t know*, and 25 (37%) responded *Not applicable*.

Research Question Four

Does Straight-Lining Have an Impact on Work Processes, Social Structures, Employee Innovations, and Communication?

Goldhaber (1990) reported that the speed of centralized networks is faster than that of decentralized networks. The decentralized network was found to solve complex problems not only faster but with fewer errors than do other networks. In a centralized organization, one person is central to all messages, wherever they flow. In a decentralized organization, no one person is central to message flow. According to VanGundy (1992), organizations contain formal and informal communication networks, which help form a company’s structure and help determine its innovation effectiveness. Robbins (1994) pointed out that in an organic structure where it is low in complexity and formulation, it possesses a comprehensive information network (utilizing lateral and upward communication as well as downward), and it involves high participation in decision-making. According to Prahalad and Oosterveld (1999), management has gained experience from organizational change over the past years. Change is not only about

minimizing costs, re-engineering or increasing profitability. Change is the creation of strategies and management processes. Change should be pushed by innovation, a recent concept of opportunity. Hodge and Anthony (1991) reported that effective structure should maximize efficient goal accomplishment. It should encourage innovation, flexibility, and adaptiveness.

Supporting data for research question number four can be found in the finding of survey question number 10 and 14 which asked, "Do you feel that lines of communication in the upward, downward, and horizontal directions would improve if your organization were straight-lined?" A total of 27 (40%) responded *Yes*, 14 (21%) responded *No*, 8 (12%) responded *Don't know*, and 18 (27%) responded *Not applicable*. According to survey question number 14 which asked, "If your organization is straight-lined, have you found the flow of information in all directions to be clearer than in your previous structure?" A total of 19 (28%) responded *Yes*, 15 (22%) responded *No*, 7 (11%) responded *Don't know*, and 27 (39%) responded *Not applicable*.

Hypothesis One

If Given a Choice, Most Managers in the Airway Facilities Divisions

Including the AF Division at the FAA Academy Would Prefer a Straight-Lined Organization to a Nonstraight-Lined Organization.

Supporting data for this hypothesis can be found in the finding under survey question number 16 which asked, "Which structure do you prefer?" A total of 46 (67%)

responded *Straight-lined*, 15 (22%) responded *Nonstraight-lined*, and 7 (11%) responded *Other*.

Harvey (1990) reported that centralization means dominant use of authoritative command and limited participation, a situation that makes change difficult. Wagner and Hollenbeck (1992) reported that managers in the United States prefer centralization to decentralization because it allows them to concentrate both authority and decision-making at the top where it is convenient for their use. Many managers in a centralized type of process feel keeping this power at the top allows them to reap the benefit of making decisions that make them comfortable. Maintaining decision-making power at the top gives management alone the opportunity to make decisions in a centralized firm and to make decisions that are in its own best interest according to Wagner and Hollenbeck.

According to Weirisma (2000), the investigator determines whether the hypotheses support or do not support the findings. Based on the findings, hypothesis number one would be accepted because it was supported by 46 (67%) of the respondents.

Hypothesis Two

*Straight-Lined Organizations Would Improve Efficiency More than
Nonstraight-Lined Organizations.*

Supporting data for this hypothesis can be found in the finding under survey question number eleven which asked, "If straight-lined, has your organization become more efficient, effective, and productive in day-to-day tasks? A total of 17 (25%)

responded *Yes*, 18 (27%) responded *No*, 8 (11%) responded *Don't know*, and 25 (37%) responded *Not applicable*.

Hampton (1994) reported that a decentralized orientation typically has effectiveness and flexibility advantages; centralized orientations often have efficiency advantages. According to Koch and Godden (1996), if management would give up some of its authority this would allow businesses to involve employees in the decision-making process and improve efficiency.

Based on the findings, hypothesis number two would not be accepted by the investigator because no clear majority of the respondents supported one choice over another to a great extent.

Hypothesis Three

Most Managers Would like to See Their Employees Participate in the Decision-making Process Regardless of the Organizational Structure.

Supporting data for this hypothesis can be found in the finding under survey question number 20 which asked, "In either structure, straight-lined or nonstraight-lined, would you like to see all employees become more involved in the decision-making process?" A total of 58 (85%) responded *Yes*, 8 (12%) responded *No*, and 4 (3%) responded *Don't Know*.

Becker and Steele (1995) believed that involvement of employees in the decision-making process is very important if one is to be successful in large businesses, especially in this day and age. Employees should be given responsibility and authority that are

meaningful in many areas of decision-making. Employees' participation in the decision-making process is an attractive idea, especially from the perspective of societal values (Lawler, 1986). Some companies are moving in a direction of democratic forums that will foster greater participation. Unfortunately, many of these initiatives have failed in the public and private sector according to (McLagan & Nel, 1995).

Based on the findings, hypothesis number three would be accepted by the investigator because it was well supported by 58 (85%) of the respondents.

CHAPTER V
SUMMARY, CONCLUSIONS, AND
RECOMMENDATIONS

Summary

This study described the advantages and the disadvantages of straight-lined and nonstraight-lined organizations at the Mike Monroney Aeronautical Center FAA Academy. This chapter presented the summary, conclusions, and discussion of the recommendations of this study, which were derived from a written survey and face-to-face interviews that were conducted at the FAA Academy, Headquarters, and the Region in the Airway Facilities organizations.

Many of the respondents believed the FAA Academy AF Division should be straight-lined to the AFZ organization in headquarters. An important outcome of the findings was many of the respondents believed, regardless of the structure, employees should be empowered more and allowed to participate more in the decision-making process. The respondents stated technical training would be better served in its present structure. The survey also revealed most of the respondents had worked in some other structure prior to their present structure. The majority of the respondents believed the AF Division at the FAA Academy would improve its working relations with the field if it was straight-lined to headquarters. A large percentage of the respondents believed the

FAA organizations as a closed-type structure with a top-down management style. It was not too surprising to see the majority of the respondents were against the layers of management being reduced because it would affect their positions.

The survey was given to managers in the Airway Facilities division throughout the nation because of the tremendous amount of experience in straight-lined and nonstraight-lined structures. The results from the survey indicated most of the candidates believed the AF Division within the FAA Academy should be straight-lined either to ATS or AFZ in headquarters.

The responses to the questionnaire clearly indicated all interested parties should very carefully consider the AF Division for the straight-lined process. According to the findings, many of the respondents believed that working relationships and employee involvement were very important factors in any organization regardless of its structure. The findings also revealed the majority of the respondents surveyed were managers in a straight-lined structure, but they appeared to be honest and open with their responses.

Based on the review of the literature, there is no *one* right structure for any organization but rather a combination may work best. Organizations have to “try on” various structures to see which one suits their needs best. Another factor noted in the literature was to allow employees to participate in the decision-making process because the days of having a large number of middle management are rapidly fading away. This is true in the public and private sector, and those in positions to make a difference must to take a front seat in this process and make it happen.

The responses to Question 9 revealed that, regardless of the type of structure that an organization is in, the acquisition of human and fiscal resources to be a difficult

process. A total of 46 (67%) chose the straight-lined structure because of the direct route top management in headquarters. An overwhelming 61 (90%) of the respondents did not believe power and control should be a major reason for an organization to be straight-lined. Because all of the respondents were of the management rank, it is not a surprise the majority of them responded, "No, I would not like to see the layers of management decreased." They may have considered how such a move would affect them personally and possibly removed them from their management positions.

A total of 58 respondents (85%) were in favor of including employees in the decision-making process because of the FAA's closed-type structure. Most of the respondents believed that the FAA organization is a closed-type structure utilizing a top-down management style.

Based on the responses from the interview process, much confusion exists concerning what chain of command the AF Division at the FAA Academy falls under. When it comes to acquiring additional fiscal and human resources, it appears no one wants to own up to being responsible for making this happen. The AF Division is under the umbrella of the ARC organization, but the financial support comes from the ATS organization. This is where many of the problems are generated because it appeared the AF Division has to answer to two bosses. Sometimes this can create major impacts. Demands exist from both sides, and often the AF Division at the FAA Academy are stretched thin in trying to meet these demands.

The survey and the interview findings revealed the majority of the respondents presently work in a straight-lined organization and believe the FAA Academy AF Division should be straight-lined to the AFZ organization in headquarters. The findings

also revealed many of the respondents believe the relationship between the Academy AF Division and the field would be improved if the AF Division were straight-lined to headquarters.

Based on the findings, many of the respondents did not agree that technical training provided by the FAA Academy AF Division would be greatly improved if it were completely controlled out of headquarters. So while many of the respondents believe the relationship would improve if AF became straight-lined as stated above, they did not believe training would benefit in the same manner. According to the results of the questionnaire, all of the structures had employees who were highly motivated, which means no matter what organizational structure one may be a part of one can find employees who are motivated. No matter which organizational structure one may be a part of, human and fiscal resources can be a challenge when trying to justify acquiring more. Another result of the survey was that communication in all directions appeared to be better in a straight-lined structure. As far as efficiency and effectiveness is concerned, most of the respondents in straight-lined organizations stated they were not any more efficient or effective than in their previous structures. Another finding of the study was that most of the respondents believed the level of empowerment should increase regardless of the structure. Although many of the respondents felt that top management fear decentralization, the willingness to step out of the box and empower employees may reduce this fear.

The survey also illustrated that most respondents preferred the straight-lined structure; they did not think power and control should be the major reason for an organization to move in that direction. Most of the respondents who participated in this

process had been straight-lined for three years or more. The responses to the questionnaire revealed that while many of the respondents wanted to see employees become more empowered and made part of the decision-making process; they do not want to see the layers of management decrease. Another interesting point was many of the respondents believed the organization, which funded the AF Division operation, should also control it. In reference to experience, the majority of the respondents stated they had worked in other organizational structures.

Conclusions

The findings from the study resulted in the following conclusions:

- A total of 37 (55%) of the respondents who work in a straight-lined organization and would like to see the AF Division at the FAA Academy straight-lined to headquarters.
- The findings indicated 43 (63%) of the respondents believed that the relationship between the field and the FAA Academy would improve if the AF Division was straight-lined to headquarters.
- Regardless of the structure, 39 (58%) of the respondents indicated that their employees were highly motivated.
- A total of 47 (69%) of the respondents found human and fiscal resources hard to acquire regardless of the organizational structure.
- Lines of communication in the upward, downward, and horizontal directions would improve if the AF Division was straight-lined to headquarters because of the direct route.

- A total of 41 (61%) of the respondents believed that the level of empowerment should increase for employees regardless of the organizational structure.
- The findings indicated 43 respondents (63%) believed that the FAA's mission would be clearer if the AF Division at the FAA Academy was straight-lined to headquarters.
- A total of 41 respondents (60%) believed that top management today fears decentralization.
- A total of 61 (90%) of the respondents indicated that power and control should not be a major reason for an organization to be straight-lined.
- All of the AF Divisions in the field were straight-lined more than a decade ago.
- A total of 33 respondents (48%) would not like to see the layers of management decrease because it would mean reducing management positions.
- A total of 41 respondents (60%) considered the FAA organization to be a closed organization with a top-down management style still to this day.
- The findings indicated 39 respondents (57%) believed that the organization that funds the operations of the AF Division at the FAA Academy should also control the training and resources.
- A total of 58 respondents (85%) had previous experience in another type of structure.

Also based on the finding of the study, there was evidence to support the conclusions as they related to the hypotheses. They are as follows:

- If given a choice, most managers in the Airway Facilities Divisions, including the AF Division at the FAA Academy, would prefer a straight-lined organization to nonstraight-lined organizations. The findings revealed a total of 46 (67%) preferred straight-lined organizations.
- Straight-lined organizations would improve efficiency more than nonstraight-lined organizations. A total of 25 (37%) stated that the organizational structure was not an important factor in improving efficiency.
- Most managers would like to see their employees participate in the decision-making process regardless of the organizational structure. A total of 58 (85%) responded that they would welcome employee participation.

Based on the findings from the interview questions in Chapter IV the advantages of a straight-lined organization according to the majority of the respondents were:

- It brings the parent organization in and gives them a first hand view of its operations;
- There is no middle person involved;
- The manager/unit work directly with core sponsor;
- There is a direct line to parent organization;
- There is more control within the organization regarding organizational operations, planning, and resources and closer to the customers.

The disadvantages of a straight-lined organization according to the majority of the respondents were:

- It requires a parent organization to acquire more resources to handle its own business;
- There is no middle management to speak to headquarters as an intermediary on training issues/concerns;
- There are more responsibilities and tasks need to be performed within the organization;
- It requires more resources and funding that may not be forthcoming and more union issues.

In conclusion, the review of literature expressed very similar and in some cases identical responses to the findings of the interview questions on the advantages and disadvantages of centralized (straight-lined) and decentralized (nonstraight-lined) organizational structures. Brooke (1984) stated that advantages and disadvantages occur in all areas of management, and they are all related to many different situations that can occur in any style. One advantage that can be gained from centralization is improved allocation of resources, but this is not the only one. Effective management cannot be gained from the inefficient allocation of material resources.

Deutsch and Kochen (1980) believed some advantages exist in being an extremely centralized organization. These advantages include the chance of achieving and holding concentration of resources, quickness and consistency of decision-making, higher visibility, and much easier orientations for customers looking for service.

A disadvantage or weakness of an extremely centralized organization is that it consists of a tall structure with many layers of management. Another of its liabilities include information overload that is often crowded with communication avenues and facilities, which results in long delays or breakdown of the system. Also, many of the solutions for handling overload usually created further liabilities, such as an increase in long waiting lines, frequent errors, and low morale of employees (Deutsch & Kochen, 1980).

Recommendations

It is imperative that all of the key players are involved in the decision-making process, especially those organizations that will be impacted by change. This team would be responsible for determining which organization the AF Division would report to if the decision were made to straight-line. Management must not allow power and control to be reasons for straight-lining the AF Division within the Academy. Regardless of the structure, employees must be empowered and allowed to participate in the decision-making process. An important step in achieving a workforce that is truly empowered is to reduce the layers of middle management. Since training is a primary interest of all the entities involved, focus must be placed in that area to ensure its continued quality, whether the AF Division is straight-lined or not. Enhancing the working relationships among all parties involved is imperative because it will definitely make a difference in the way business is conducted.

Any organization that is considering undergoing a major change, be it straight-lined or nonstraight-lined, should act cautiously in its approach to restructure so as to

ensure the right decisions are made throughout the process. An organization, regardless of its structure, must take care of its employees and its customers to be successful.

Another important factor is that information must be shared, and communication must flow freely in all directions of the organization so that it may be effective and efficient.

Recommendations for Further Studies

- Studies that would include a larger population such as first level supervisors and the employees from the Airway Facilities Divisions as well as other organizations within the FAA.
- Studies conducted to review comparisons between the results of Headquarters, regions, and Aeronautical Center personnel in reference to the advantages and the disadvantages of straight-lined and nonstraight-lined organizations in the FAA.
- Studies to address those managers and supervisors with less than five years of managerial experience to view issues from their perspective.
- Studies using random sampling to eliminate bias, both conscious and unconscious, which is often introduced while selecting a sample. This would allow the results to be generalized back to the public.

BIBLIOGRAPHY

- Badia, P., & Runyon, R. P. (1982). *Fundamentals of behavioral research*. Reading, CA: Addison-Wesley Publishing Company.
- Barry, D. (1991, summer). Managing the boneless team: Lessons in distributed leadership. *Organizational Dynamics*. Vol. 20, p. 31.
- Becker, F., & Steele, F. (1995). *Workplace by design*. San Francisco, CA: Jossey-Bass Inc.
- Benfari, R. (1995). *Changing your management style*. New York, NY: Simon & Schuster Inc.
- Bennis, W., & Nanus, B. (1985). *Leaders*. New York, NY: Harper & Row, Publishers, Inc.
- Bennis, W. G., & Townsend, R. (1995). *Reinventing leadership*. New York, NY: William Morrow & Company.
- Blanchard, K. H., Blanchard, K., & Ballard, J. (1996). *Managing by values*. San Francisco, CA: Bennett-Koehler Publishers.
- Blanchard, K. H., Carlos, J. P., & Randolph, A. (1996). *Empowerment takes more than a minute*. San Francisco, CA: Berrett-Koehler Publishers.
- Blanchard, K. H., Carlos, J.P., & Randolph, A. (1999). *The 3 keys to empowerment*. San Francisco, CA: Barrett-Koehler Publishers.
- Bolman, L. G., & Deal T. E. (1991). *Reframing organization*. San Francisco, CA: Jossey-Bass Inc.
- Brooke, M. Z. (1984). *Centralization and autonomy*. New York, NY: Praeger Publishers CBS Educational & Professional Publishing, Inc.
- Byham, W. C., & Cox, J. (1988). *Zapp: The lightning of empowerment*. New York, NY: Ballantine Books.

Canavan, P. (1998, September). Motorola: Agility for the whole organization. *Human Resource Planning*. Human Resource Planning Society. 1(21).

Cartwright, D., & Zander, A. (1968). *Group dynamics*. New York, NY: Harper & Row Publishers, Inc.

Champy, J. (1995). *Reengineering management*. New York, NY: Harper-Collins Publishers, Inc.

Chang, R. Y., & Curtain, M. J. (1994). *Succeeding as a self-managed team*. Irvine, CA: Richard Chang Associates, Inc.

Collins, J. (1999, July-August). Turning goals into results. *Harvard Business Review*. J. D. Edwards World Source Company, pp. 76-77.

Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Journal*. (13), pp. 471-482.

Conner, D. R. (1992). *Managing at the speed of change*. New York, NY: Random House, Inc.

Covey, S. R. (1989). *The 7 habits of highly effective people*. New York, NY: Simon & Schuster Publishers, Inc.

Davidow, W. H., & Malone, M. S. (1992). *The virtual corporation*. New York, NY: Harper-Collins Publishers, Inc.

Deal, T. E., & Kennedy, A. A. (1982). *Corporate cultures*. New York, NY: Addison-Wesley Publishing Company, Inc.

Deutsch, K. W., & Kochen, M. (1980). *Decentralization*. Cambridge MA: Oelgeschlager, Gunn & Hain, Publishers, Inc.

Drory, A., & Romm, T. (1990). The definition of organizational politics: A review. *Human Relations*. (34), pp. 1133-34.

Drucker, P. F. (1974). *Management: Tasks, responsibilities and practices*. New York, NY: Fitzhenry & Whiteside Limited.

Drucker, P. F. (1993). *Post capitalist society*. New York, NY: Harper-Collins Publishers, Inc.

Drucker, P. F. (1995). *Managing in a time of great change*. New York, NY: Penguin Books USA Inc.

Drucker, P. F. (1998). *On the profession of management*. Boston, MA: Harvard Business School Publishing, Inc.

Drucker, P. F. (1999). *Management challenges for the 21st century*. New York, NY: Harper-Collins Publishers, Inc.

Etzioni, A. (1964). *Modern organizations*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Farazmand, A. (1994). *Modern organizations*. Westport, CT: Greenwood Publishing Group, Inc.

Freiberg, J., & Freiberg, K. (1996). *Nuts*. Austin, TX: Bard Press, Inc.

Ghoshal, S., & Barlett, C. A. (1997). *The individualized corporation*. New York, NY: Harper-Collins Publishers, Inc.

Goetsch, D. L., & Davis, S. B. (1997). *Introduction to total quality*. Upper Saddle River, NJ: Prentice-Hall, Inc.

Goldhaber, G. (1990). *Organizational communication*. Dubuque, IA: Wm. C. Brown.

Gore, A. (1996). *The best kept secrets in government*. Washington, D.C.: U.S. Government.

Government Executive Magazine, (1998). The manager's edge. Washington, D.C.: National Journal Group.

Graham, S., Wedman, J. F., & Garvin-Kester, B. (1994). Managing coaching skills. *Performance Improvement Quarterly*. Vol. 7, p. 81.

Hagstron, J. (1999). Goodbye government girl. *Government Executive*. Washington, D.C.: National Journal Inc. Vol. 31, pp. 19-20.

Hampton, D. R., Summer, C. E., & Webber, R. A. (1968). *Organizational Behavior and the Practice of Management*. Glenview, Ill: Scott, Foresman and Company.

Hampton, J. J. (1994). Decentralizing and sharing. *AMA Management Handbook*. New York, NY: AMACOM.

Harbour, J. L. (1996). *Cycle time reduction*. New York, NY: Quality Resources, Inc.

- Harper, B., & Harper A. (1992). *Succeeding as a self-directed work team*. Mohegan Lake, NY: MW Corporation.
- Harvey, T. R. (1990). *Checklist for change*. Needham Heights, MA: Simon & Schuster, Inc.
- Havelock, R. G., & Zlotolow, S. (1995). *The Change Agent's Guide*. Englewood Cliffs, NJ: Educational Technology Publications, Inc.
- Hersey, P. (1984). *The situational leader*. New York, NY: Warner Books, Inc.
- Hersey, P., & Blanchard, K. (1993). *Management of organizational behavior*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Hodge, B. J., & Anthony, W. P. (1991). *Organization theory*. Needham Heights, MA: Allyn & Bacon Inc.
- Hornestay, D. (1997, February). Been there, done that. *Government Executive*. Washington, D.C.: National Journal Inc. 43-45.
- Huse, E. F., & Bowditch, J. L. (1973). *Behavior in organizations: A systems approach to managing*. Menlo Park, CA: Addison-Wesley Publishing Company, Inc.
- Isaac, S., & Michael, W.B. (1997). *Handbook in research and evaluation: For education and the behavioral sciences*. (3rd. ed.). San Diego, CA: Educational and Industrial Testing Services.
- Jones, L. B. (1995). *Jesus CEO*. Minneapolis, MN: Hyperion Publishers.
- Jones, L. M., Bowers, D. G., & Fuller, S. H. (1982). *Management and employee relationships within the federal aviation administration*. Oklahoma City, OK: The Institute for Social Research and McKinsey & Company, Inc.
- Kelman, S. (2000, January). Making change. *Government Executive*. Washington, D.C.: National Journal Inc. Vol. 32, p. 30.
- Kelman, S. (2000, January). Managing change. *Government Executive*. Washington, D.C.: National Journal Inc. Vol. 32, pp. 29-30.
- Koch, R., & Golden, I. (1996). *Managing without management*. London, UK: Nicholas Brealey.
- Kochanski, J. (1987, Spring). Hiring in self-regulating work teams. *National Productivity Review*. Vol. 6, p. 153.

Kolb, D. A., Osland, J. S., & Rubin, I. M. (1995). *Organizational behavior*. Englewood Cliffs, NJ: Prentice Hall, Inc.

Koskinen, J. (1996). *Enterprise government*. Burke, VA: Chatelaine Press, Inc.

Kotter, J. P. (1985). *Power and influence: Beyond formal authority*. New York, NY: Free Press.

Kotter, J. P. (1996). *Leading change*. Cambridge, MA: Harvard Business School Publishing.

Kouzes, J. M., & Posner, B. P. (1995). *The leadership challenge*. San Francisco, CA: Jossey-Bass Inc.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, pp. 607-610.

Kriegel, R. J., & Brandt, D. (1997). *Sacred cows make the best burgers*. New York, NY: Warner Books, Inc.

Kuman, P., & Ghadially, R. (1989). Organizational politics and its effects on members in organizations. *Human Relations*, (35), p. 305.

Lawler, E. E. III (1986). *High-involvement management*. San Francisco, CA: Jossey-Bass Inc.

Manz, C. C., Keating, D. E., & Donnellon, A. (1990, Autumn). Preparing for an organizational change to employee self-management: the managerial transition. *Organizational Dynamics*. Vol. 19, p. 15.

Manz, C. C., & Sims, H. P. (1989). *Superleadership*. New York, NY: Simon & Schuster Inc.

Manz, C. C., & Sims, H. P. (1995). *Business without bosses*. New York, NY: Wiley, John & Sons, Inc.

Maxwell, J. C. (1999). *The 21 indispensable qualities of a leader*. Hampshire, UK: Thomas Nelson, Inc.

McLagan, P., & Nel, C. (1995). *The age of participation*. San Francisco, CA: Berrett-Koehler, Inc.

Nadler, D. A., Shaw, R. B., & Walton, A. E. (1995). *Discontinuous change*. San Francisco, CA: Jossey-Bass Inc.

- Odiorne, G. S. (1979). *Management by Objectives II*. Belmont, CA: Fearon Pitman Publishers, Inc.
- Osborne, D., & Gaebler, T. (1993). *Reinventing government*. New York, NY: Penguin Books, USA Inc.
- Ouchi, W. (1981). *Theory Z*. Reading, MA: Addison-Wesley Publishing Company, Inc.
- Pearce, T. (1995). *Leading out loud*. San Francisco, CA: Jossey-Bass Inc.
- Peters, T. (1992). *Liberation management*. New York, NY: Excel.
- Peters, T. (1994a). *The Tom Peters seminar*. New York, NY: Excel.
- Peters, T. (1994b). *The pursuit of wow*. New York, NY: Excel
- Pinsonneault, A., & Kraemer, K. L., (1997, May). Middle management downsizing. *Management Science*. (43), pp. 1-2.
- Prahalad, C. K., & Oosterveld, J. P. (1999). Transforming internal government. *Sloan Management Review*. Cambridge, MA: Sloan Management Review Association, MIT., pp. 37-38.
- Purser, R. E., & Cabana, S. (1998). *The self-managing organization*. New York, NY: Simon & Schuster Trade Publishing.
- Quinn, R. E. (1997). *Deep change*. San Francisco, CA: Jossey-Bass, Inc.
- Quinn, R. E., & Spreitzer, G. M. (1997). The road to empowerment: Seven questions every leader should consider. *Organizational Dynamics*. (26), pp. 37-49.
- Ritvo, R. A., Litwin, A. H., & Butler, L. (1995). *Managing in the age of change*. New York, NY: Irwin Professional Publishing.
- Robbins, S. (1994). *Essentials of organizational behavior*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Rossett, A. (1987). *Training needs assessment*. Englewood Cliffs, NJ: Educational Technology Publications, Inc.
- Sashkin, M., & Kiser, K. J. (1993). *Total quality management*. San Francisco, CA: Barrett-Koehler Publishers, Inc.
- Schein, E. H. (1999). *Corporate culture*. San Francisco, CA: Jossey-Bass Inc.

Shipper, F., & Manz, C. C. (1992, winter) employee self-management without formally designated teams: An alternative road to empowerment. *Organizational Dynamics*. Vol. 20, pp. 48-49.

Stowell, S. J., & Starcevich, M. M. (1998). *The coach*. Sandy, UT: Published by the Center for Management and Organization Effectiveness.

Thompson, R. C., Bailey, L. L., & Farmer, W. L. (1998). *Predictors of perceived empowerment: An initial assessment*. Oklahoma City, OK: Civil Aeromedical Institute.

Tichy, N. M. (1997). *The leadership engine*. New York, NY: Harper-Collins Publishers, Inc.

Tobias, C. U. (1999). *The way we work*. Nashville, TN: Broadman & Holman Publishers.

Tracy, D. (1989). *The first book of common sense management*. New York, NY: William Morrow & Company, Inc.

Tubbs, S. L. (1995). *Small group interaction*. New York, NY: McGraw-Hill, Inc.

VanGundy, A. B. (1992). *Idea power*. New York, NY: Amacom.

Wagner, J. A. III, & Hollenbeck, J. R. (1992). *Management of organizational behavior*. Englewood Cliffs, NJ: Prentice Hall, Inc.

Wah, L. (1999, May). Older bosses are best. *Management Review*. Saranac Lake, NY: American Management Association International, p. 7.

Weber, P. F. (1999, May). Getting a grip on employee growth. *Training and Development*. Alexandria, VA: American Society for Training and Development Inc., pp. 87-91.

Weirsmas, W. (2000). Historical Research. *Research methods in education: An introduction*. (7th ed.). Needham Heights, MA: Pearson Education Company.

Wellins, R. S., Byham, W. C., & Wilson, J. M. (1991). *Empowered teams*. San Francisco, CA: Jossey-Bass, Inc.

White, R. P., Cramer, S., & Hodgson, P. (1996). *The future of leadership*. Philadelphia, PA: Pittman Publishing.

Witt, L. A. (1992). *Organizational politics, participation in decision-making, and job satisfaction*. Oklahoma City, OK: Civil Aeromedical Institute.

APPENDIXES

APPENDIX A

SURVEY COVER LETTER

Date: May 14, 1999

Subject: Dissertation for A Doctoral Degree in Applied Science Education

To whom it may concern:

My name is Jessie L. McMullen, and I am a graduate student pursuing a doctoral degree in the Aviation and Space program at Oklahoma State University (OSU) located in Stillwater, Oklahoma. This questionnaire is part of a research study for my dissertation.

The purpose of this questionnaire is to identify the advantages and the disadvantages of straight-lined and nonstraight-lined organizations within the Federal Aviation Administration (FAA) Airway Facilities Divisions. The main focus of this study will be on the AF Division (AMA-400) at the FAA Academy. Your response is extremely important to me because it will assist me in completing my studies in this area. Your assistance will also help me to gain more insight on the different organizational structures within the FAA.

Please take a moment to complete the enclosed survey and return it to me in the self-addressed stamped envelope by May 14, 1999. The questionnaire consists of a total of 23 questions that require a circled response. Please select the response that closely represents your opinion on this matter by circling the letter of your choice. I appreciate the time that you will spend filling out this survey. Thank you in advance for your participation.

Sincerely,

Jessie L. McMullen
Manager, AF Division, AMA-400

APPENDIX B

SURVEY INSTRUMENT

QUESTIONNAIRE

Please respond by circling the appropriate response:

1. My present organization is:
 - a. Straight-lined
 - b. Nonstraight-lined
 - c. Other
 - d. Don't know

2. In your opinion, if the Airway Facilities Division within the FAA Academy was to be straight-lined, which organization should it be placed under?
 - a. ATS
 - b. AFZ
 - c. Other

3. In your opinion, should the AF Division at the FAA Academy be straight-lined to headquarters?
 - a. Yes
 - b. No
 - c. Don't know

4. What would be the impact on the relationships between the field and the FAA Academy if the AF Division at the Academy became straight-lined to headquarters?
 - a. Better
 - b. No change
 - c. Worse

5. The technical training provided by the AF Division at the Academy would be greatly improved if ATS or AFZ completely controlled training out of headquarters.
 - a. Strongly agree
 - b. Agree
 - c. Don't know
 - d. Disagree
 - e. Strongly disagree.

6. Are your employees highly motivated in your present organizational structure?
 - a. Yes
 - b. No
 - c. Don't know

7. Do you find your roles and responsibilities clearer in your present structure than in your previous structure?
 - a. Yes
 - b. No
 - c. Don't know
 - d. N/A

8. In your opinion, do employees feel more secure in the present structure compared to the previous structure?
 - a. Yes
 - b. No
 - c. Don't know
 - d. N/A

9. Have you found human and fiscal resources easier to acquire in your present organizational structure?
 - a. Yes
 - b. No
 - c. Don't know

10. Do you feel that lines of communications in the upward, downward, and horizontal directions would improve if your organization were straight-lined?
 - a. Yes
 - b. No
 - c. Don't know
 - d. N/A

11. If straight-lined, has your organization become more efficient, effective, and productive in the day-to-day tasks?
 - a. Yes
 - b. No
 - c. Don't know
 - d. N/A

12. The level of empowerment should increase for employees regardless of whether an organization is straight-lined or nonstraight-lined.
 - a. Strongly agree
 - b. Agree
 - c. Don't know
 - d. Disagree
 - e. Strongly disagree

13. Which structure would cause less confusion in reference to the FAA's mission?
 - a. Straight-lined
 - b. Nonstraight-lined
 - c. Don't know

14. If your organization is straight-lined, have you found the flow of information in all directions to be clearer than in your previous organization?
 - a. Yes
 - b. No
 - c. Don't know
 - d. N/A

15. Do you feel that top management today fears decentralization?
 - a. Yes
 - b. No
 - c. Don't know

16. Which system do you prefer?
 - a. Straight-lined
 - b. Nonstraight-lined
 - c. Other
17. Should power and control be the major reasons for an organization to be straight-lined?
 - a. Yes
 - b. No
 - c. Don't know
18. If your organization is straight-lined, how long has it been that way?
 - a. less than 3 years
 - b. 3 - 5 years
 - c. greater than 5 years
 - d. N/A
19. Regardless of your organizational structure, would you like to see the layers of management decrease?
 - a. Yes
 - b. No
 - c. Don't know
20. In either structure, straight-lined or nonstraight-lined, would you like to see all employees become more involved in the decision-making process?
 - a. Yes
 - b. No
 - c. Don't know
21. Do you consider the FAA organizations to be mostly closed organizations with a top-down management style?
 - a. Yes
 - b. No
 - c. Don't know

22. Should the organization that funds the operations of the AF Division at the FAA Academy control the training, and fiscal resources?
- a. Yes
 - b. No
 - c. Don't know
23. Have you had previous experience in another type of organizational structure?
- a. Yes
 - b. No
 - c. Don't know

APPENDIX C

INTERVIEW QUESTIONS

1. What is the present structure of your organization?
 - a. straight-lined
 - b. nonstraight-lined
 - c. other

2. How long has your organization been in its present structure?
 - a. less than 3 years
 - b. 3 to 5 years
 - c. greater than 5 years

3. Identify two advantages and disadvantages of a straight-lined organization.

4. Do you consider the benefits of a straight-lined organization to be greater than those of a nonstraight-lined organization? If so why? If not, why not?

5. In reference to human and fiscal resources, do you find it easier to acquire either in your present structure?

6. If straight-lined do you find it easier to communicate to upper management at the headquarters level?

7. Do you see straight-lining an organization as flattening the organization or making it taller?

8. Do you see straight-lining an organization the same as centralization?

APPENDIX D

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

Date: May 10, 1999 IRB #: ED-99-127

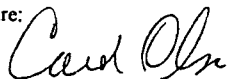
Proposal Title: "ADVANTAGES AND DISADVANTAGES OF STRAIGHT-LINED
(CENTRALIZED) ORGANIZATIONS AND NONSTRAIGHT-LINED
(DECENTRALIZED) ORGANIZATIONS AT THE FAA ACADEMY, AIRWAY
FACILITY DIVISION"

Principal Investigator(s): H.C. McClure
Jessie McMullen

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

Signature:



Carol Olson, Director of University Research Compliance

May 10, 1999

Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

VITA ²

Jessie L. McMullen

Candidate for the Degree of

Doctor of Education

Thesis: ADVANTAGES AND DISADVANTAGES OF STRAIGHT-LINED AND NONSTRAIGHT-LINED ORGANIZATIONS AT THE AIRWAY FACILITIES TRAINING DIVISION OF THE FEDERAL AVIATION ADMINISTRATION ACADEMY

Major Field: Applied Education Studies

Biographical:

Personal Data: Born in Itta Bena, Mississippi, August 16, 1954, the son of O. Z. and Christine McMullen.

Education: Graduated from West Tallahatchie High School, Webb, Mississippi in May 1973; received Associate in Technology degree from Langston University, Langston, Oklahoma with a major in Electronics Technology in July 1976; received Bachelor of Science degree from Langston University, Langston, Oklahoma with a major in Industrial Arts Education in May 1978; received Master of Science in Management degree from Southern Nazarene University, Bethany, Oklahoma with a major in Business Management in August 1992. Completed the requirement for the Doctor of Education degree at Oklahoma State University in December 2000.

Professional Experience: Electronics technician at the Federal Aviation Administration (FAA) Mike Monroney Aeronautical Center, Oklahoma City, Oklahoma, 1976-1979; electronics technician at the FAA Colorado Springs, Colorado, 1979-1984; electronics technician at the FAA Centennial Airport, Denver, Colorado, 1984-1986; electronics technician/engineer (instructor) at FAA Academy, Oklahoma City, Oklahoma, 1986-1992; adjunct faculty at Oklahoma State University, Stillwater, Oklahoma; supervisor electronics engineer (first level) at FAA Academy, Oklahoma City, Oklahoma, 1992-1994; supervisor electronics

engineer (second level) at FAA Academy Oklahoma City, Oklahoma, January 1995-October 1995; adjunct professor at Oklahoma State University, Stillwater, Oklahoma, August 1999-December 1999; airway facilities division manager at FAA Academy, Oklahoma City, Oklahoma, 1995-present.

Professional Memberships: Delta Mu Delta Honor Society, Alpha Phi Alpha Fraternity, Southern Brothers Social/Charity Club, Langston University National Alumni Association, Member of Cathedral of Praise World Outreach Center.