

CHARACTERISTICS OF WOMEN IN MANAGEMENT  
AT THE MIKE MONRONEY AERONAUTICAL  
CENTER IN OKLAHOMA CITY, OKLAHOMA

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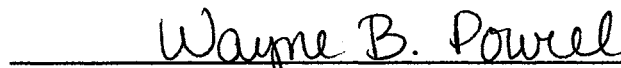
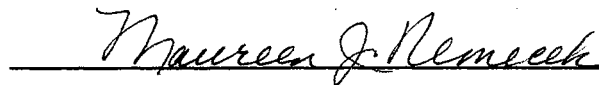
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## CHAPTER I

### INTRODUCTION

The aviation industry provides a unique environment for women in management because it is comprised of a blend of highly technical skills with strong administrative and interpersonal skills. Although considerable attention has been given to women in aviation and women in other management roles, the characteristics which contribute to management success in the highly technical and male dominant aviation environment have not been adequately explored. A better understanding of the characteristics associated with women who have attained significant career progression in an aviation organization could provide valuable insights for future success as well as for meeting gender-specific academic needs in developing aviation management skills. From whom better to learn than from those who have marched the path before.

Because the Federal Aviation Administration's Mike Monroney Aeronautical Center (MMAC) located in Oklahoma City, Oklahoma, is a composite of aviation functions representing and supporting almost every type of aviation organization, its female senior management personnel could provide a rich source of data. The findings would not only be utilized for studying career progression of female managers in the FAA, but also for helping to define what is important for future study of women in aviation management in general.

As a vital service and support facility for the FAA and the U.S. Department of Transportation (DOT), the MMAC employs over 4,000 government and contract personnel. According to the Mike Monroney Aeronautical Center Annual Report (1998), the services provided by this Center includes aviation training, National Airspace System Logistics and maintenance support, airspace and communications technology, public information services, accounting and disbursement services, human resource management, aviation careers, acquisition, engineering, aviation medical, human factors research, organizational research, aircraft and airmen information, standards development for pilot and aircraft performance, flight procedures and inspection, fleet management, aviation security, airport planning and a multitude of other services. The customer base is worldwide and includes the entire FAA; transportation modes in the DOT (that is, motor carrier, highway traffic, railroads, marine, pipeline safety, and hazardous materials transportation); other state and Federal agencies and foreign governments; the aviation public including pilots, air traffic controllers, and other airmen; the media; aircraft owners; commercial air carriers; general aviation organizations; the courts, and the flying public. Virtually all aspects of aviation are tracked by the facilities and activities of the organization.

A study of the characteristics of women with senior management responsibilities in an all-encompassing aviation environment could provide valuable insights regarding what is important for future study in understanding the roles of women in aviation management as a whole.

## Statement of the Problem

Because of insufficient information available in the literature regarding women in aviation management, a study of the characteristics of women currently managing aviation organizations is needed. What specific skills, abilities, attributes and other characteristics do women who manage the Mike Monroney Aeronautical Center's many aviation functions possess which may have contributed to their career achievements in that field? The answer to that question could provide valuable insights not only for the MMAC, but could also discover unknown elements for future study and contribute to development of a body of knowledge regarding women in aviation management in general.

## Purpose of the Study

The purpose of the study was to identify and describe the educational background, work experience, personal skills, individual goals, and problems faced by women in GS-15 and above management positions at the MMAC. The literature regarding women in generic management roles repeatedly focuses on characteristics of success, similarities in and differences between male and female characteristics, and the unique challenges faced by women in those roles. Information gathered during this study could provide an understanding of how the women in a wide variety of aviation management roles at the MMAC met their challenges and developed those characteristics which aided them in achieving their career goals. It could also be helpful in gathering new insights regarding unknown variables and identifying areas for future study of women in aviation management on a broader scale. The findings may ultimately prove beneficial to the

MMAC, aviation community, and Oklahoma State University Aviation and Space Program in their curricula development for women aspiring to future aviation management positions.

### Research Questions

The four broad research questions addressed in the study were designed to answer the primary question or purpose of the study which was: What specific skills, abilities, attributes, and other characteristics do women who manage the MMAC's aviation functions possess which may have contributed to their career achievements in that field? The four questions supporting the overall research question were further supported by the literature in research previously conducted regarding women in generic management roles.

The questions were:

1. What areas of individual development such as formal education, family background, and personal skills are most common for women who currently occupy positions in aviation management at the MMAC?
2. What work experiences aided in the preparation of women to progress toward a position in management at the MMAC?
3. What management skills evolved while performing the duties of a woman in aviation management and how can other women develop their talents to become qualified for a position in aviation management at the MMAC?
4. What major problems did women face as their careers progressed into positions of aviation management at the MMAC?

### Assumptions

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

1. Women in management, employed by the MMAC, provided honest and accurate responses to the questions asked during the interview process.
2. Responses to interview questions would provide relevant data applicable to the study.

### Limitations of the Study

The following limitations of the study are noted:

1. Although participants were aware that every effort would be made to protect their anonymity, they were aware that the geographic proximity of their respective organizations within the MMAC and their familiarity with career paths of other senior managers made total anonymity difficult, if not impossible. That knowledge may have introduced bias which may have caused restraint in some of the responses.
2. Because the study focused on women in management at the MMAC, findings cannot be generalized to a larger population or another organization, but can bring to the surface variables for future study in other aviation organizations.

## Definitions

The following definitions are furnished to provide a clear and concise meaning of terms used in the study:

Women in Management - Women who are employed in entry, middle, and senior level positions in management.

Senior Management - Women of the Mike Monroney Aeronautical Center who are assigned to a management position with a General Service pay grade of a GS-15 or above. This includes members of the Senior Executive Service who must complete an Executive Development Program, and whose pay scale substantially exceeds the General Service pay scale.

Mike Monroney Aeronautical Center (MMAC) - The centralized service and support facility of the Federal Aviation Administration and Department of Transportation responsible for aviation training, logistics, engineering research, standards, certification, and business services for the aviation community worldwide.

Tenant Organizations - Organizations physically located at the MMAC, but who report directly to Washington, D. C.

## Scope of the Study

The scope of the study was limited to women in senior management positions at the Mike Monroney Aeronautical Center who are located in Oklahoma City, Oklahoma. Women selected for the study occupied GS-15 or higher positions in organizations with a variety of aviation-related functional responsibilities including, but not limited to, logistics,



aviation education, engineering, human resource management, information management, procurement, and administration. The organizations they managed ranged in size from fewer than 100 to over 4,000 employees and contract personnel with responsibilities that were frequently international in scope. Subjects of the study provided a rich source of data due to the fact that their responsibilities ranged from highly technical aviation and administration skills, to soft skills necessary for interpersonal development within the organization.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Introduction

The literature available regarding the characteristics of women in aviation management was limited in scope and validates the need to conduct a study of women in aviation managerial occupations. Because the Federal Aviation Administration's (FAA) Mike Monroney Aeronautical Center (MMAC) is a microcosm of a variety of aviation functions, a study of women in senior level management positions at this facility could provide a general framework for future understanding of women in all fields of aviation management.

The literature supporting the primary research question concerning what specific skills, abilities, attributes, and other characteristics that women in management at the MMAC possess and may have contributed to their career achievements, was non-existent. A further search of the literature revealed minimal information regarding women in aviation management. However, there was an abundance of literature on women in aviation and general management.

According to Coffey and Anderson (1998), the explanation for the lack of available data is that few women have been employed in top or executive level positions long enough to be studied. Therefore, little information is currently available. Most of the

literature regarding the traits of women in aviation management focuses on the characteristics associated with female pilots, not managers.

### Women in Aviation

The difficulty of finding information relating to women in the field of aviation has various explanations, but it is more accurate to state that little research has been documented regarding women in this technical field. In an environment dominated by a white male population, women are increasingly being hired for diverse occupations, but still compose only a small minority group.

Review of the literature indicates that the most prominent group of women studied in aviation have been female pilots. Several books have been written to document their entry into the field and date back to the accomplishments made as early as the year 1911, when the first woman received her pilot's license (Holden & Griffith, 1993). The majority of studies focus on the contributions made by women during World War II because during this era, women entered aviation in larger numbers and received a great deal of attention.

Although women have worked in aviation for years, many of their accomplishments went unnoticed and were never recorded. The literature states that during the early part of this century, the media predominantly covered the aviation activities of men and did not report the aviation events performed by women. An additional reason for the lack of reported material is due to women not vocalizing their achievements (Bell, 1994). Although researchers in the 1980s and 1990s have written several books regarding the history of female pilots, there are stories that will forever remain untold.

Many initial female aviators were white and grew up in affluent or middle-class families. They were often educated, but were unique because they did not fit the typical mold of women from the 1930s. According to Verges (1991), these women exhibited courage, independence, and the ability to fight for what they wanted. Even though they did not receive approval from their families because flying planes was not considered an “appropriate activity” for women, they still continued to follow their dreams. He stated that the leadership qualities practiced by these women helped pave the way for other females in the current aviation industry.

Women were often accused of dressing like men because they wore aviation gear such as pants or coveralls when they flew. They were judged on their attire, not their flying abilities. Many church leaders sought the aid of mothers with daughters to help maintain the morality of the nation. Holden and Griffith (1993) stated that communities banded together to discourage the participation of women in aviation because they believed the industry played upon their feminine weaknesses.

According to Douglas (1991), the Ninety-Nines, International Women Pilots Association, was initially created in 1929 by a group of women who joined together to form a coalition of support for other females wanting to become pilots. The focus of the organization was to work toward alleviating the restrictions that barred women from the elite world of aviation and fight for their rights as pilots. When the government had a shortage of pilots during World War II, it sought the help of this organization to help supply trained aviators. The flying was predominantly for the transport of airplanes and material, jobs that no one else wanted to undertake.

The second aviation organization for women, established in 1941, was called the Women Flyers of America (WFA) which was a national flying club that trained female pilots (Bell, 1994). Women who joined this organization were primarily 20-35 years old, adventurous, employed, and concerned about their country's defense. When compared to men, these women were noted as exceptional students because they were more inclined to listen to the instructor.

Women who flew military aircraft during the war were commonly known as WASPs, Women's Air Force Service Pilots. This well known group flew various military aircraft and transported personnel, engines, and other material for the armed services. They also served as flight instructors and test pilots before being disbanded in 1944. After flying over 60 million miles and several million tons of equipment, a total of 38 pilots lost their lives in the line of duty. However, since the government did not classify their flying as military service, they did not receive GI insurance benefits or military burials (Verges, 1991). After the war, many found it difficult to find work with commercial airlines because most companies would hire only male pilots who had returned home from the war. At that time, the prejudices that existed in society and the large number of male aviators kept women out of this occupation.

Some of the barriers that exist for women in the field of aviation are associated with societal views that traditionally stigmatized women in supportive roles that are subservient to men. Men are thought to possess the ability to lead, an important characteristic of pilots, but women still face the false conclusion that they do not or cannot effectively manage or lead others (Swiss, 1996). Although society has somewhat adjusted to the role of women in this technical field, there are many supporters that believe that

flying planes is more appropriate for men. Some military pilots have difficulty respecting female pilots because they do not have a “warrior” instinct that is believed to be necessary for combat flying. Swiss stated that some men believe that women are only qualified to fly from point A to point B.

When compared to other minorities, women experience more situations involving harassment (Henderson, 1995). Some pilots currently in the commercial airline industry have been known to disrespect fellow women co-pilots by placing pornographic pictures in the cockpit, an offense that has the potential to cost the airlines monetary damage if a legal case is presented. According to Henderson, such culprits not only disrupt the cooperation among the flight crew, but they also potentially let their egos affect the safety of the plane being flown. He stated that although such practices occur only on occasion, the fact that it still happens is discouraging.

### Aviation Management

Although several studies have been conducted regarding the various aspects associated with women in management roles, little research has been documented that focuses solely on women in aviation management. However, a recent doctoral dissertation entitled *The Characteristics of Successful Aviation Leaders of Oklahoma* by Mary Kutz (1998) did provide findings that may be relevant to this study. In her study of aviation leaders from military, administrative, political, and other aviation organizations across the state, she concluded that characteristics relating to an individual’s career choice, education, family background, and other qualities were not consistent among the members of her study. Technical experience was not a commonality, and this seemed to

suggest that specific traits relating to these areas could not be clearly defined. According to Kutz, the similarities that did exist were: experience gained from family relationships, maintaining a balance in life, and the importance placed upon work experience. The most frequently mentioned personal value was honesty. Other terms such as integrity, high standards, vision, courage, and others were mentioned by the members of her study.

Another doctoral dissertation related to government employees entitled *High Achievers in Federal Service in Oklahoma* by David Carmichael (1994), provides information relevant to this study. In his research he found that the most common characteristic among high achievers was self-direction. These individuals were primarily guided by their values and provided an environment that facilitated and empowered others. The practice of these qualities was critical to their career achievements.

Although there are several women who have achieved executive level positions in aviation management, the magazine Aviation for Women (1998), chose to profile only six individuals. They work in senior management levels: the FAA administrator, three FAA regional administrators, and two FAA center directors. These women are making history and are opening doors for others to follow. These individuals may serve as valuable role models and provide insight regarding the characteristics associated with women at executive management levels within the federal government.

In order to obtain senior executive positions within the federal government, individuals must possess specific characteristics as identified by the U. S. Office of Personnel Management (OPM), Resources and Development Center with regard to the requirements needed by future government leaders. Edwards and Gregory (1998) discuss the new qualifications that have been developed and added to the standards used to

evaluate individuals. Ability to lead change, being results oriented, business acumen, ability to lead people, and ability to build coalitions and communications are the new characteristics utilized in the evaluation process.

In the past, government evaluation criteria focused on performance functions such as budgeting, program development, and human resource management, but have now altered this process because the next century will bring about great change and will require federal offices to adjust in order to meet these challenges. Edwards and Gregory (1998) predicted that supervisors and managers will become more attuned with the functions performed by their organization leaders. More responsibility regarding the performance of everyday work functions will be assigned to employees.

The basis for the new executive competencies are supported by the extensive research of criteria found in the private and public sectors from businesses such as American Express, Ford Motor Company, Xerox, and many others that are noted for their high performance. According to OPM, future executives in government will be required to increase their professional skills if they want to be successful and progress further in their careers. Individuals in managerial positions will be directed to acquire more leadership skills than management in order to utilize the intelligence and talent of their subordinates. Edwards and Gregory (1998) believe that the ability to provide vision and guidance to employees will become the number one priority for everyone in occupations with authority.

Bosco (1998) interviewed the first female administrator of the Federal Aviation Administration (FAA) who provided an overview regarding the primary issue affecting women and the qualities that need to be developed in order to be successful in an aviation



management career. The current issue receiving a great deal of attention is the elimination of discrimination practices in the agency regarding allegations that are of a sexual nature or any other form of misconduct associated with gender. The administrator stated that she held the management staff at the FAA accountable for ensuring that individuals who support negative behaviors are corrected or released from service.

Bosco went on to write that career progression within the FAA can be accomplished by women who develop skills in areas such as statistics, mathematical modeling, and economic analysis. Managers need to be able to gain an in-depth understanding regarding the operations of the FAA and how it relates to safety and security. Flexibility and the ability to change will be two qualities that the next century will demand in order for the agency to be successful in its mission. Managers must also be responsive to their customers within and outside their organizations and continually embrace the idea of lifelong learning.

The article Movers and Shakers: Top Women at the FAA (Aviation for Women, 1998) profiled three women regional administrators located in the Southern, Eastern, and Great Lakes locations and two Center directors from the William J. Hughes Technical Center and Mike Monroney Aeronautical Center. These women managed locations that are comprised of 2,000 to 8,000 federal employees and contract workers. The regions and centers together perform the following aviation related functions: research and testing focusing on air traffic control, communications, navigation, airports, safety and security; coordination with certificated air operators and the general aviation public; air traffic control, logistics, engineering, and other areas that help support and ensure the safety of the flying public.

The research indicated that many similar characteristics existed among the group, but each individual possesses her own unique personality and management practices. Educational backgrounds were varied to include degrees in areas of study such as business, psychology, human resource development, and law. According to the article, women in these positions place a high value on education, but also on the ability to continue learning throughout their lives. The women emphasized that this practice should become commonplace for employees, in order to meet the future challenges that will face the FAA.

The advice provided by these women in aviation management indicated that women currently working or about to enter this field should: establish clear goals regarding the career path they want to follow, remain flexible when faced with the challenges that arise, maintain a balance in life by remaining close with family and friends, take risks, and seek opportunities that provide enjoyment.

### Culture

For some time, the organizational culture of business organizations was thought to be a simple explanation of the product lines or services that companies produced for their customers. In the 1980s the term “culture” began to take on a new meaning and enticed researchers to analyze and evaluate how and why certain policies, practices, philosophies, attitudes, and even dress codes that existed in the culture of corporations could provide greater insight into the complexities of the environment in which employees work (Stoner, et al., 1995).

Culture is now more accurately defined as how an organization responds to its environment. The present culture in businesses was formulated by generations of men and was not influenced by the values or beliefs of women or minorities because these groups were not previously represented in the work force as they are today. According to Godfrey (1992) more women are choosing to become entrepreneurs and are creating small businesses where they can originate their own environment that is devoid of elements associated with traditional cultures. Godfrey stated that women are guided by a different set of business values that seek to support work and family responsibilities, develop a network of relationships, achieve purpose and money; and so forth. Although some larger businesses such as Levi Strauss and Johnson & Johnson are trying to include some of the same values, it is more difficult to implement change in an established cultural environment, especially in larger corporations. Godfrey also mentioned that some male entrepreneurs such as Ben and Jerry's also try to incorporate new cultural worth in the operation of their business, which seems to suggest that the practice of new culture trends is not gender specific.

It seems that individuals who choose to create a new working environment realize that in order to be successful in dealing with the changes and increasing diversity factors that the next century is sure to bring, they must develop a new environment that is universal in nature to support the complexities of business and all groups of people.

The organizational structure or culture of a business can dramatically impact the opportunities available to women and minorities. According to Padgett (1993), the actions of employees are often determined by the structure and inherent values of the company where they work. Structural determinates such as power, opportunity, and

relative numbers are three primary elements that require immediate attention in order to improve the career progression of women in the organization. Iannuzzi (1997) provides support to this research with findings that state companies who continue to ignore the value of a diversified workforce will continue to exhibit practices that keep women and minorities at the lower levels of the corporation pyramid. He indicated that the lawsuits filed against Avis and Texaco are two examples regarding the subjective interpretation that most business have with the definition of ethics and morality. According to their criteria, companies do believe that are doing everything in their power to help women and minorities progress into higher levels of management.

The women in aviation profiled in the magazine *Aviation for Women* (1998) provided their opinions regarding the culture of the environment that exists at their own FAA facilities. The analysis of the findings reflected that a conducive and supportive environment for women and minorities is prevalent in the organizations. Although discrimination factors were more apparent 20 to 30 years ago, the current culture does not limit or hinder the career progression of women or minorities. At some locations, the number of women in management, or senior level positions, has risen as much as 10%. Occupations labeled according to gender are no longer an accepted practice in the technical field or male dominated areas. Opportunities available to women are limitless.

The literature indicated that some of the women were the “first” to occupy senior level management positions and dealt with a great deal of skepticism because it was difficult for employees to believe that a woman was qualified to handle the responsibility. Padgett (1993) writes that when compared to men, women have unique pressures applied by the organization because they are often viewed as “pioneers” in their position.

According to Brooks and Brooks (1997), women must initially identify the aspects of the culture in which they work and try to pinpoint the elements that are important to the organization. Questions that women should ask are: (1) How do people get noticed? (2) Is the environment conducive to teamwork? and (3) Is the atmosphere relaxed or serious? Once women find the answers to these questions, they will have a greater understanding on how they can effectively transition into management and work with their male counterparts.

## Management

### General Management

A search of the literature provided sources directly related to information associated with general management characteristics that both women and men possess. These findings indicate universal characteristics that are relevant to managerial positions in public or private organizations.

Cohen (1999), a West Point graduate and retired major general in the U. S. Air Force Reserve, identified eight qualities managers exhibit or can be taught. They are applicable to women, as well as men, because they represent universal elements that enable a person to become effective in leading an organization. He stated that a successful manager believes in integrity and works to maintain an environment of trust among peers and employees. Managers also possess the necessary knowledge and skills in order to oversee the functions of the organization, and do not rely upon office politics to cover up or overshadow their lack of talent. Managers must clearly identify goals, objectives, and

the vision they choose to follow, but they also prepare to apply the commitment that is necessary to carry out such plans.

Cohen also discussed the importance of visualizing success because if managers cannot see themselves achieving their goals, they will ultimately face failure. Taking care of the customer is a top priority, but a manager is also concerned with the welfare of his or her employees. In conclusion, he stated that managers accept the responsibility associated with their position by putting the organization before personal goals. Managers set the example for others, especially employees who constantly observe their actions.

Contradictory to Cohen's belief is the view of Kelly (1998). He believes that a truly successful manager cannot be taught. As the owner of a large manufacturing company, he promoted several of his employees into managerial positions after they exhibited the proper technical skills to perform their jobs. He learned that although some traits can be taught, a person must already possess certain basic skills such as communication, conflict management, and other personnel practices in order to be successful. He believed that a person must be adept at handling personality conflicts because the majority of problems that arise from employees entail people issues. Kelly stated that it is also important to be able to develop a vision regarding the direction the organization should follow. When people make mistakes, it takes a special type of individual to be able to clearly inform employees where and how they failed without damaging their pride. Kelly believes these talents are personal gifts that cannot be learned in the classroom.

A key factor that plays an important part in determining the success of a manager can be linked directly with the individual's enjoyment of work (Berman, 1998). Positions

that require a great deal of responsibility are inherently plagued with high level stresses and can serve to drain the energy of those who work in such occupations. By learning to cope with negative elements, managers are better able to contend with adversity in a positive manner.

Berman also discusses the environment that a successful manager should create to nourish the organization and the employees who perform the daily activities. Her analysis included the importance that managers have in setting the tone for the organization. If managers are unable to function effectively during stressful times, employees will cease to trust their abilities. Constant communication and honesty are two critical elements that are utilized to inform employees and make them an integral part of the company. Her final comments concluded that managers who are aware of and understand the human dimension of business will be able to produce results for the company and themselves.

A survey of 1,000 CEOs from Fortune 500 companies was conducted by Heidrick and Struggles (1998) to analyze the qualities needed to perform in an executive capacity, specifically as a chief financial officer. The following traits were listed as key in the decision process: creativity, objectivity, and analytical abilities. The findings concluded that these managers must be skilled in strategic planning, leadership, and communication skills. Current executives stated that general managerial skills were the most important areas where an individual should be able to demonstrate past experience.

### Women in Management

The literature search regarding information pertaining to women in management provided findings that entail numerous sources that are directly attributed to women.

Although the studies are more general in terms of characteristics, work history, education, and so forth, they may provide a framework that will be relevant to the identification of qualities found in women in aviation management.

A census study conducted by Catalyst, a non-profit research and advisory organization for women, provided information regarding the number of white and minority women who occupied positions on the boards of directors with Fortune 500 companies in 1998. In their cooperation with businesses to assist professional women with career advancement, Catalyst utilized the total number of current board seats, industry breakdown, geographic location, and so forth in order to determine the percentage of women and minorities who currently occupy such positions. Their intent was to provide statistical data to represent the progression that women and minorities have made, but also to show that there is still a great deal to be done concerning equal representation.

Findings indicated that over the past six years, from 1993 to 1998, the total percentage of women directors with Fortune 500 companies has increased from 8.3% to 11.1%. Out of 6,606 seats available, 671 are occupied by women. Further calculations show that women of color account for 58 board directors, which is under 1% of the total number. Of the 429 companies included in this census, 71 do not have any women who serve on their boards of directors. Findings showed that newer companies are less likely to have women on their boards than corporations that have been established on the Fortune 500 list.

Some of the duties associated with board membership require individuals to serve on committees in a leadership or membership capacity. For the first time, Catalyst evaluated this element and discovered that women were more likely to be found on



committees responsible for audit and social and corporate functions (approximately 15%) than on executive committees (2%). It is also more probable that they will serve as a committee chair on social and corporate committees.

The industry breakdown of women board members has been classified into four major divisions. They are predominantly found in businesses such as soaps and cosmetics (23.9%), savings and loans (21.6%), publishing (18.4%), and scientific and photographic (16.2%). They are least likely to hold positions in advertising and marketing (5.7%), food service (6.1%), engineering or construction (6.7%), and mail or freight services (6.7%).

Geographic locations of companies also provide additional information regarding the representation of women and may suggest that Fortune 500 companies in certain parts of the country have a tendency to promote more women and minorities into board positions. The findings concluded that Northeast companies have the largest number of women on boards (93%), followed by the Midwest with 86%, the South with 81%, and the West with 78%, which has the lowest percentage overall.

Although women continue to increase their representation as members of boards, Catalyst projected the time when gender equality will occur in the United States is in the year 2064, well into the second half of the next century.

Kelly (1991), Mainiero (1994), Jacobs (1992), and Padgett (1993) agree that the model for a traditional manager was based on the characteristics identified with the white male and failed to take into account the life experiences of women. For years, women and minorities have been compared to the traditional stereotype of society, which implied the life of a male as the norm. Since then all employees have been measured by such an example.

A definition of the characteristics associated with successful women in management can easily be provided in a brief description of basic qualities that have been identified throughout the research. They are believed to be indicators that can be used today to identify women who will obtain future success in their careers.

In the book, *Women's Career Development*, White, Cox, and Cooper (1992) summarize the information regarding the typical successful woman manager. Their study concluded that the basic elements identified by women in management were: firstborn child in the family; experience of a problematic parent-child relationship; struggle for independence; democratic parents who refrained from influencing her career; father as the primary influence; middle-class family; mother worked outside the home; completion of a formal degree program at a university; constant seeking to advance career; challenging boundaries; and making all decisions regarding her career.

Although the characteristics listed are common among women in managerial positions, White, et al., (1992) stated that not all women in management possess these traits because each individual brings her own uniqueness. Even though certain characteristics can be identified, it is highly unlikely that a standard list of skills or abilities can be defined to include all possible qualities that might be relevant to women in management.

In a study of women chief executives from diverse companies in private industry, White, et al., (1992) concluded that a wide variety of personalities exist among women, and to identify a pattern of one particular type was not logical and could not be supported due to the lack of evidence.

Nordvik (1996) conducted a study of 1,063 Norwegian adults, 232 females and 831 males, who were measured by the Myers-Briggs Type Indicator (MBTI) and compared to the theories of Holland and Schein regarding vocational personalities and career anchors. This trio of personality factors is threaded together by the belief that everyone possesses specific preferences that involve individual coping and development abilities. Nordvik stated that every human exercises certain traits that are utilized to identify his or her true selves in their personal and professional environments. Although personality identification may be a strong determinant when choosing a vocational path, he warned that people should understand it is not an absolute science and therefore should not be utilized as a conclusive determinant of a career path.

In the book entitled *Type Talk* by Kroeger and Thuesen (1988), discussion is focused solely on the MBTI which is comprised of 16 different types that are believed to be a useful determining factor for identifying an individual's personality classification. Although more recent books have been written regarding this concept, the descriptions associated with these personality types have not altered from their original definitions. Kroeger and Thuesen identified this as a scientific approach known as Typewatching, commonly referred to as "name-calling." They believed that people traditionally "attach labels" to others in order to identify and classify them into a frame of reference that is recognizable.

Studies attributed to their information are backed by more than 60 years of analysis, beginning with research conducted by the Swiss-born psychiatrist C. G. Jung. He theorized that the predictability of human behavior was consistent and able to be categorized (McCaulley, 1981). During the early years of psychology, the primary focus

was on the abnormalities attributed to humans, but Jung believed that individuals are initially born with specific qualities that closely identify who they are, the choices they make, and their reactions to the environment. These preferences often determine personal associations with others, individual likes and dislikes, and work selection.

A student of Jung, Katharine Briggs, with her daughter Isabel Briggs Myers, developed a psychological instrument that would scientifically test his theory. Their accomplishments with this method during World War II were recognized because they helped to assign individuals, based upon their personality type, to the most appropriate tasks to support the war effort.

The four personality categories identified by Jung are tested and classified, utilizing the MBTI test. They are extroverted or introverted, sensing or intuitive, thinking or feeling, and judging or perceiving. Relevant literature associated with the MBTI written by authors such as Briggs and McCaulley (1985) and Schemel (1982) reach the same conclusions regarding the explanation of each type. A potential danger associated with type profiles is that some people may categorize others according to their letters (for example, ENTJ) without fully understanding the intent of the MBTI. According to Sanford (1982), the purpose of this test is to identify personality characteristics which allow people to be themselves and communicate more effectively with others; it enhances human understanding.

Research conducted by White, et al., (1992) focused on three major categories that would prove valuable in the continued study of personality and motivational factors of women in management: (a) locus of control; (b) need for achievement; and (c) self-efficacy.

Locus of control was a consistent trait found among most women who occupied high level positions, predominantly in management or occupations in business that required a great deal of responsibility. The guiding theory behind the concept was the individual's belief that she is responsible and has influence over the events in her life. Competence, initiative, self-reliance, and independence are qualities exhibited by individuals who believe their hard work created their success (White, et al., 1992).

Another factor often linked with career success was the need for achievement. For most women who strive to advance in their careers and do not view their work as just a job, the desire to accomplish difficult tasks, achieve high standards, and overcome obstacles remains a driving force that often invokes a high degree of self-development. According to Langan-Fox and Roth (1995), this need for achievement often draws many women into the entrepreneurship representing approximately 31% of the population of small business owners.

Self-efficacy, referred to as the belief of individuals that they contain the internal power that will enable them to control the outcome in any given situation, proves central to their life and acts as a dominant factor which influences how to act, think, and feel (Langan-Fox & Roth, 1995).

In her book *The Female Advantage*, Helgesen (1990) found that women who have achieved positions of responsibility in management at an early stage in their careers have done so by accepting responsibilities at work that drew upon their ability to make tough decisions, independently, with no outside assistance. Through such experiences, job skills are developed that aid in the creation of an individual identity, and contribute to career success. She found that women in management set challenging goals and determined how

to attain those objectives by establishing a sense of direction. Goals are an important element that directly relates to the identity of the individual and indicates the ability to achieve. This often results in increased self-esteem and continues the ability to develop competence. Highly motivated individuals with a broad skill base are more likely to be successful in today's fast-paced environment (Kerr & McDougall, 1999).

According to the original source by Fayol (1949), Richardson, Rodwell, and Baty, (1995) wrote that movement between positions within the same organization was characteristic of women in management because it enabled them to accumulate a breadth of knowledge. The attainment of knowledge regarding how other departments operate increased the level of competition women offer and sometimes created the differentiating factor between those who succeeded and those who failed. They stated that women seeking positions in management should achieve skills in the areas of planning, organizing, directing, and controlling, with an emphasis in acquiring knowledge of the entire business and technical expertise.

White, et al., (1992) stated that most of the successful women managers included in their research were involved with a mentor at least once during their career. The relationship was informal and contained both psychological and career benefits which provided an increase in their confidence and the opportunity to utilize talents, making them more visible to upper management. Jacobs (1992) and Coffey and Anderson (1998) both found that women benefitted from mentors because they served as role models and provided counseling services in areas that dealt with clarifying career paths and suggestions for other prospects. A small minority felt that mentors were not necessary and believed the establishment of a dependent relationship with a superior was a sign of

weakness and perpetuated dependency. They believed mentoring undermined an individual's internal strength.

In the desire to accomplish personal and professional goals, women tend to focus on achieving high standards of excellence and exhibit high performance in their work. They are initially reward-oriented and inner-directed, concerned about business relationships with people, and derive a great deal of satisfaction from them (Guttek & Larwood, 1987). The costs associated with success affect three areas in their lives: family, relationships, and leisure time.

Gaining access to traditionally male positions can be accomplished by seeking assignments that reflect talent and draw attention. Marketing skills and abilities help increase promotability, but women should also work to build business alliances. In some businesses, women are not allotted the opportunity for a mentor so in order to reach the next career step, women should work on building trusting and productive relationships with bosses, peers, and senior women. Swiss (1996) identified several ways for women to gather personal support: promote accomplishments on the job; make the boss look good; consult peers for feedback; volunteer for assignments that will receive notice from above and below; nurture communication skills with fellow women and potential allies; avoid being regarded merely as a helper; and seek to become a mentor.

### Management Progression

The review of literature found consistent information regarding the advice of women in management to other women who wish to follow in their footsteps and advance into positions of responsibility within the organization. In the book entitled *Seven Secrets*

*of Successful Women*, Brooks and Brooks (1997) devised a list of seven strategies identified by women in management. They stated that women who wanted to progress into various levels of management should follow these steps that have been proven successful. Their study focused on senior-level women in female-friendly companies in order to determine if their achievements were a result of specific personal and professional characteristics or organizational environmental factors. The companies studied were comprised of businesses in areas such as banking, airlines, pharmaceuticals, publishing, and insurance. Findings showed that a consensus existed among the women in seven primary areas.

Brooks and Brooks stated that these women believed having a mentor relationship with a superior was critical to their development because it increased their understanding of the organization's political system, and it enhanced their visibility among other executives. Since women have not had the same advantages of men, women need to utilize this relationship to increase their promotion potential. The majority of the women believed that male mentors were more helpful because they provided a different perspective and insight on how to succeed in a male dominated business world.

Brooks and Brooks discussed findings from a study of 461 female executives and 325 male CEOs which indicated that 44% of men believed that a formal mentoring program was important and useful for career progression, but only 2% of the women felt the same. The survey also stated that 37% of the women believed informal mentor relationships were more essential to their careers.

The second strategy that women in management practice is to increase their visibility by working on projects with other teams. This activity enhanced their network



system because they were able to meet people from other organizations and individuals in management positions. A former president of Bryn Mawr College (Brooks & Brooks, 1997) commented that women should work on projects that are important to senior executives. They should also work on committees, volunteer for assignments, and meet socially with people.

Networking is another strategy that will increase visibility, but it is primarily important because it involves women in relationships that can be both personally and professionally beneficial. Although some consider this action to be manipulative, the true essence of the term is the idea that an individual utilizes these relationships to learn from others with whom she can develop a special bond.

The ability to communicate effectively with others is another important tool that women in management must learn to master. Although this process is affected by several variables such as “what is said,” and “how it is received,” women must be flexible and adapt to the situation. Communication can increase teamwork and productivity among individuals who must work together to accomplish the goals of the organization. (Brooks & Brooks, 1997).

Maintaining a balance between work and home is another strategy followed by these women because they have learned that focusing on one area leads to a disruption in others (Brooks & Brooks, 1997). To have a better quality of life, women must understand that the roles their mothers portrayed were vastly different than those of today’s women. Although career women still have difficulty taking time off from work to handle family responsibilities, they are becoming more comfortable with this practice as long as the company is supportive (McGee-Cooper, 1990).

The women who participated in the study conducted by Brooks and Brooks (1997) stated that they were risk takers although they do not feel completely comfortable taking chances. However, they believed that women can lessen the risk by increasing their experience level and carefully planning out the details of the event. Although not every risk is a gamble, women often do not seek these opportunities because they fear failure, believe they are too old, or do not have faith in their abilities. To counter these apprehensions, women should surround themselves with supportive people who will offer encouragement.

In conclusion, according to Brooks and Brooks, the last strategy the women practiced was the development and understanding of political practices in the company. To be effective in this area, women must learn three key elements: visibility, mentors, and networking. They are connected together and form the basic political structure found in most organizations. If women are knowledgeable regarding how these factors work together, they will become more competitive.

When beginning personal development and making career decisions, women suggest initially identifying barriers that detract and could hinder an individual from reaching personal and professional goals. Feelings of incompetence and lack of internal power can often impede self-promoting actions that enable the attainment of career progression (Rosenthal, Guest, & Peccei, 1996). Although obstacles may exist, the key is to remain objective and continue to work to find ways to overcome the barriers.

Seeking other women in management can prove worthwhile because they often give valuable information regarding the achievement of goals (Gutek & Larwood, 1987). The literature also suggests that women sing their own praises more often, otherwise,

those who are in power will fail to notice them. Women should publicize their own style, but be careful not to become a carbon copy of the traditional male model. Gutek and Larwood's findings suggested that many of these recommendations are difficult for women to exhibit because they find it hard to boast about their accomplishments, and end up remaining a silent member of the workforce, failing to move up the corporate ladder (DiDio, 1998).

Working in the Information Age has created a new dilemma for women who want to progress in their career fields. Paula Jacobs (1999) conducted a study of women who work in technical businesses that were trying to decide if they wanted to stay in technical positions or move into management. Her analysis provided a process that women working in the public or private industry could utilize to help determine the most appropriate solution. She stated that women must first identify what they want in life before making any kind of career decision. They must analyze their internal interests and seek work that provides exciting challenges. Women who prefer to work by themselves should not progress into management because the occupation involves working on projects through others. White, et al., (1992) states that having a sense of direction provides women with a plan to follow that will lead them in a direction of choice. The move into management can be accomplished if women learn how to work smarter than men to accomplish their goals.

Although management positions typically pay more than others, it is important not to choose this occupation unless a person enjoys working with others and is capable of manipulating a multitude of tasks in a specified time frame. Jacobs reiterates her point regarding individual interests and suggests that all employees take a moment to

contemplate whether they have the personnel, time management, prioritizing, and multitasking skills that a manager will need to be successful.

The term “The Glass Ceiling” is a reference from the literature that focuses on the concept that although women have made tremendous progression into entry levels in management, they have been prevented from advancing further due to invisible variables that block their path. Several reasons such as organizational factors, willingness to take career risks, and achievement records are just a few of the elements that have been analyzed in an effort to explain this phenomenon (Golant, 1993).

Although more women have joined the workforce in recent years, few have been able to progress further than junior level managerial positions within large corporations. In a study of 1,000 companies, 97% of the top executive positions are held by men and .5% are held by women (Fernandez, 1993). Since women have traditionally been excluded from male activities such as golf and other sports, they have not had the opportunity to make connections or develop relationships with those who ultimately make promotional decisions. Fernandez stated that the alienation of women and minorities by the traditional white male executive disadvantaged them in their careers because they are not able to break the gender and racial barriers that exist in today’s corporate environment.

Crashing the Glass Ceiling by DiDio (1998) provides advice from four top female executives who broke through the traditional barriers that had prevented women from entering the field of technology. The women stated that although gender discrimination may occur in some businesses, it was not the primary hindrance to their careers. To move up the proverbial corporate ladder, women should create a strong network among a wide

network among a wide range of people, gain visibility and seize the opportunity to work on projects that will be recognized by superiors, and build a respectable reputation by being committed to accomplishing results.

DiDio also wrote that these women did not believe the “glass ceiling” was a force that could not be defeated. Instead they chose to view it as just another obstacle. All four women agreed that the biggest mistake some individuals make is to underestimate themselves. It is important that women take control of their own destiny. Ribbens (1999) supports DiDio’s research with information regarding the current international findings of women in management. Her article also refers to the control factor that women must apply towards their careers. In relation to work progression, women must take responsibility for their own destiny.

According to Timpane (1997), women who have advanced their careers into executive level positions within biotechnology and pharmaceutical companies possess many of the same characteristics attributed to successful women found in other industries. The women in his study advised young women to find contacts, mentors, and focus on success rather than gender. Timpane concluded that although the obstacles set before them were worth the challenge, they did make it more difficult to balance the activities in life.

Many researchers indicate that greater opportunity exists for women in smaller companies because career pathways are less defined (Ribbens, 1999). Communication was viewed to be the most important ability that a woman could possess because being able to articulate effectively with people can make or break a career. Growing a thick skin and enduring negative words or actions by male colleagues can help women avoid

unnecessary confrontation. Ribbens stated that women should strive to win the war, not the battle.

A qualitative study conducted by Coffey and Anderson (1998) researched a group of women who occupied senior level management positions. These 21 women were interviewed for the purpose of understanding their experiences and opinions regarding women in management. Conclusions indicated that the women possessed diverse work backgrounds and careers that were comprised of at least six important occupation transfers. They classified their progression as “bizarre” or “atypical” because many believed their career paths were a result of external factors such as luck or being in the right place at the right time. Other literature by Rosenthal (1996), Browne (1997), and Rosenthal, Guest, and Peccei (1996) also provided examples of women in managerial positions who did not seem to believe that their skills or experience qualified them for their current position.

Coffey and Anderson’s (1998) findings indicated that the importance of mentoring was addressed by women as a key element in the initiation of their first promotion and credited the relationship as being responsible for the initial achievements in their careers. The advice received from superiors, peers, and friends provided helpful information that was used to develop skills and increase personal competencies.

Sitterly and Duke (1988) provided research that suggested women should write a list of clear goals to achieve over the next 5 to 10 years of their lives. Prioritizing and identifying a detailed schedule of activities will help individuals attain specific goals. They determined that women should remember to remain flexible and constantly revisit the list of goals, making adjustments when necessary.

In the book, *The Promotable Woman*, Carr-Ruffino (1985) also suggests several tips for implementing a plan to accomplish career goals: visualize success; take action to make things happen; communicate with others regarding personal goals; get support from people who can help achieve goals; and stay focused.

Women Repave Road to Success, by DiDio (1997), discussed a research study conducted by Dr. Carol Gallagher regarding 75 top female executives who successfully attained high managerial positions in the private sector. The conclusions challenged and negated the abolishment of the previous belief that women must copy the practices of men in order to be promoted in their careers. DiDio identified four characteristics relating to the career development process that each individual followed. The similarities discovered were competency in their specific fields, outcomes that required high performance, alliances at all levels within and outside the organization, and endurance. Most of the women in the study stressed the importance of taking risks in their careers. They felt that in order to progress, they had to be willing to take chances and learn not to play it “safe.” Her conclusions found that it is important for a woman to create her own business practices that are reflective of her true self.

Abell (1999) also discussed commonalties among top executives and stated that individuals capable of handling dual agendas enhance their chance of success. Today, managers are challenged to operate within future and present strategies, a difficult and increasing practice in business.

Abell continued by stating that women who seek challenges will open a world full of numerous opportunities. A female executive at TSI International Software, Inc., who participated in his study, lives by this practice and has been very successful in her career

because she is constantly looking for something new to test her skills. In her opinion, women should dare to take chances outside their comfort zone.

### Career Versus Family

The responsibilities associated with having a career and motherhood are laden with difficulties that create stress and pressure in a woman's personal and professional life. The decision to choose one or the other, a combination of both, or relinquish the hopes of having a progressive career are just a few of the options some women feel are the only choices available. To understand and explain the progression of women's careers, studies and other reviews of literature focus on specific areas such as career patterns, motherhood and career, maternity leave, and family issues. Each section provides an aspect that may help explain the under-representation of women in managerial positions in public and private sectors.

One of the earlier researchers named Zytowski (1969) provided a theory regarding women's career patterns by focusing his attention on occupational behavior. He believed that the primary role society assigned to women as the "homemaker" in the family and their occupation of choice was not connected to their role in life. However, Fitzgerald and Bertz (1983) argued that he did not take into account the number of women who entered male dominated occupations and also failed to adequately explain the reasoning behind their behavior.

Zytowski (1969) stated that between 1950 and 1972, the most common career patterns for women were: (1) Stable Home-Making – no work experience; married while in school or immediately after; (2) Conventional Career Pattern – work until married;



(3) Stable Working Pattern – career oriented; no interruption; (4) Double Track – combine work and family; (5) Interrupted – women who work, leave, and return to work at a later time; (6) Unstable – irregular work patterns; and (7) Multiple Trial – precarious job record.

Of these seven categories, stable homemaking and conventional career were the most common. In today's environment, women predominantly choose the double track pattern and are finding it increasingly difficult to perform the responsibilities of these roles.

During childbearing years, women who take maternity leave often return to work after the child reaches the age of twelve months. The desire to return to work full-time or part-time is a decision heavily controlled by institutional or psychological constraints and family stipulations (White, et al., 1992). Societal and individual situations play an important part in the choice to incorporate motherhood and career, but the success in achieving compatibility between these roles is influenced by outside factors such as support from spouse, flexible work hours, adequate day care, and the woman's position within the organization.

Throughout time, women have faced many barriers that created obstacles toward their achieving personal and professional goals. Today, some of the same barriers exist which still hinder the development of individual talent. Research has indicated that the two primary forces affecting the career progression of women are marital status and motherhood (Reis, 1995).

Men have confessed to the benefits received from having wives who provided emotional support and performed services that aided their careers, but professional working women often lack the same assistance from a husband or partner (White, et al.,

1992). Women who remain single have more time for work and are not faced with interruptions that are associated with married and family life. They are believed to have an advantage over married women and minorities with regard to career progression because they are viewed more closely with the standard image of the white working male.

The decision to have children and the time of the event is critical in determining the career success of women. The thirties are when most women are deciding whether to have children, and it is also a critical phase in the development of their career. A study conducted on the dynamics of women's labor concluded that the age of the youngest child being raised heavily influenced women's employment (Dex, Joshi, Macran, & McCulloch, 1998). The decision to take time off and raise children can eliminate future opportunities and promotions for women who lack the educational qualifications normally required for career advancement. Individuals with advanced degrees do not face as many difficulties because their education level allows them to return to work with fewer restrictions and resume, to a certain extent, employment at the same level where they left.

To help eliminate the difficulties associated with work and motherhood, many women have decided to become entrepreneurs and start their own business from home, allowing them to take care of the children without sacrificing their careers (Popcorn & Marigold, 1996). Living in the Information Age has provided various tools such as computers, modems, and fax machines which maintain the vital communication link from many home-based businesses to their customers (Yoest, 1996). The National Foundation for Women Business Owners states that over 3.5 million women are running home-based businesses in order to have a family and a career. If corporations will not work to meet their needs, they will create their own work and be the boss (Cowan & Cowan, 1992).

The decision to take maternity leave has many consequences for women, often entailing a break in career service and most likely hindering the opportunity for future development. This choice serves to support the claim that women do not navigate their career in the same manner as men and are not as serious or dedicated to their work. Rapport and Rapport (1980) state that this is the reason so many women accept low paying jobs. They believe that women are not represented in authoritative occupations because they would rather spend time with their families and do not want to complete the additional hours that managers must sometimes work.

The decision to take maternity leave is heavily influenced by economic factors such as the provision of income during this period. Previously, women worked in low paying positions that possessed neither power nor prestige because it allowed them to acquire extra money for the family. During this time, earning wages was considered secondary for women because their income was not the main provider of essential goods and services for the family (Grossman & Chester, 1990). Times have changed and women are now the primary or exclusive contributor in single parental units and low income families. They are the ones most inclined to receive the benefits offered by the Family and Medical Leave Act (FMLA), and to lose their jobs by taking maternity or parental leave (Hyde, Essex, Clark, Klein & Byrd, 1996). Companies are not required to pay for leave, but they sometimes pay all or at least part of the individual's income. The businesses that are fully excluded from the FMLA employ 50 or fewer employees.

The economic issues associated with maternity leave are the very heart of the parental leave policies, directly affecting a large number of working women. They can and often do lead to negative effects on companies as well as the family unit (Rapport &

Rapport, 1980). Women who return to work too soon may be less productive because they often lack the energy needed to handle the demands of the job, and may also be combating feelings of depression from being separated from their newborn.

In today's economy, the income of working women is essential to help ensure the standard of living for the family. An example of the average income today, where the man and woman both work, is approximately \$48,169, compared to \$30,075 without her salary (Hyde, et al., 1996). The loss of either income could seriously impact the family unit, demonstrating the importance of both male and female earnings.

In the 1980s, theorists concluded that in order for a woman to have a successful career, she must forgo marriage and children and commit herself to work. This belief was unsupported by many of the early studies in vocational psychology. In 1996, Moreau concluded that most of the research concerning the impact of maternal employment affecting families failed to show any disastrous consequences resulting from the employment of women. He stated that having a mother who works positively influences children, especially young girls.

Domestic duties and maintaining adequate childcare are the two main sources of conflict that exist in families where the man and woman work. When family and work overlap, most couples find it difficult to change the expectations of their traditional roles because the burden of maintaining harmony between home and family have been placed primarily upon the shoulders of women. Researchers believe if men would learn the skills needed to perform nontraditional tasks and women could release their control over some domestic chores, less conflict would exist (Yoest, 1996).

## Gender Differences

The differences that exist between men and women are numerous and sometimes complex, but an awareness concerning the similarities and dissimilarities may prove helpful to women in business. Findings related to this subject explicitly state that women do not have to act like men in order to succeed in business. The following literature states that the practices exhibited by either gender is not better or worse than the other. It merely suggests, that since women have been disadvantaged in the workforce, they must become more familiar with the rules that men seem to operate by in business.

In the workforce, women and minorities represent approximately two-thirds of America's employees (Stoner, et al., 1995). As the diversity of employees continues to increase, managers must learn to rethink past organizational practices and develop new policies that will be beneficial to the changes occurring in business and the needs of its diverse groups of people.

In the book *How Men Think*, Mendell (1996) stated that there are seven rules that women should follow in order to be successful in a man's world. Although these rules require some adjustment, they currently are effective in the business world that exists today. The first rule is that women should act competent and convince superiors that they are the best person for the job. Actions such as letting people know personal successes and accepting projects, even if they seem too complex, will be recognized as a positive by others. In society, women have pretended to doubt their confidence because exhibiting characteristics associated with men is viewed as unfeminine. However, the findings stated

that even though women believe they are acting inappropriately by bragging about themselves, men see it as convincing others they are competent.

Secondly, women must act strong because with strength comes control and control is power. Mendell wrote that women have a tendency to “ask” for the opportunity to handle situations on their own. Instead, they should take charge which ultimately places them in a position of authority. The next rule is an understanding that work encompasses enjoyable as well as unpleasant tasks. Women must always stay involved, even when things seem not worthwhile. The remaining rules such as remaining unemotional, being aggressive, defending one’s opinion, and being part of a team are the last rules identified for women to follow. Most of these rules are self-explanatory and are a common practice among men in business. Mendell believes that until more women are employed in positions of power to effectively change these rules, women will have to continue to play the “game” according to the code developed by men.

Prior research involving career progression for men and women points to differences associated with gender preferences such as position attributes and work-related character. Because of the importance women place upon conditions at work (Schein, Mueller, & Jaccobson, 1989), they are viewed negatively in the business world because they make requests that will enable them to coordinate their dual roles as a mother and career women. Related literature by Chusmir and Parker (1991) also supports this disapproving view in their analysis of priority factors identified by women. They discovered that security, personal fulfillment, and family were rated highly, but men placed greater value upon intrinsic factors such as self-expression, achievements through work, and career progression.

Konrad and Cannings (1997) focused their attention towards the effects of gender roles congruence and statistical discrimination among large organizations. Results from their research supported the belief that discrepancies still exist and are not receiving the full attention deserved by executives responsible for complying and leading the organization in the fair and equal treatment of employees. The statistical factor examined was the number of hours worked by both genders. Results indicated that women worked just as many hours as men and continued to maintain the responsibilities placed upon them by their external roles as wife and mother. Employers evaluated in this study stated that the number of hours worked was a positive prediction for career advancement, but they still believed men were more committed to the company. In their analysis, Konrad and Cannings (1997) state that justifications for promotions seem to be more connected with social issues than relevant facts. Traditional gender roles remain an underlying element in the career advancement for women.

According to Hartman (1987), women continue to be categorized as the primary caretakers of the family and are less committed to their work because of the demands placed upon them by these responsibilities. In order, they are categorized as wife, mother, and employee, indicating to their superiors that they do not have the time, energy, or ability to effectively coordinate the requirements of these duties and be successful in management or executive level positions (Burn, 1995). However, men who have families are first viewed as the primary breadwinner, but are believed to be capable of handling multiple roles and are recognized for "being a family man." This gender discrepancy in the workplace has created the concept that females must become "superwomen" in order to be eligible for career progression. Lewis (1996) and Sorensen (1994) state that as long as

women continue to represent the majority of individuals employed in “feminine” positions such as clerical, sales, and service work in order to accommodate their families, their careers will always be considered secondary.

According to Browne (1997), this data is unsupported and inconclusive because not enough substantial data have been compiled for an accurate prediction regarding the work attitudes and career progression of either sex. Opponents state that gender discrepancies have been overinflated and miscalculated to represent an inaccurate picture of the differences that exist among the sexes (Lefkowitz, 1994). The development of a career and work preferences regarding occupations in management is viewed equally by men and women, which supports the belief that the work force environment does not shape individuals; similarities already exist due to personal internal factors. Overall, people have primary requirements that the career path they choose is interesting and challenging. Pay, work results, and promotional achievements are rated as less important.

A study of 87 managers from two organizations, a hospital and a financial services company, was conducted in order to determine some plausible explanation for the lack of women represented in junior and mid-level managerial positions. Rosenthal, et al., (1996) studied a total of 46 women and 41 men who had technical and non-technical backgrounds. The researchers focused their attention on how managers viewed their personal work performance because they believed women had a tendency to devalue their skills and abilities, which may serve to hinder career progression.

An attribution theory developed by Weiner (1985) was utilized in this study to show how an individual's internal beliefs can dramatically affect self-esteem, future goals and performance, and intrinsic motivation. These elements are believed to be key



characteristics that must be possessed before a person can obtain career progression into management. Other studies concluded that men and women account for their successes with opposing explanations. For example, Deaux (1976) stated that women tend to attribute their achievements to luck and less to their ability or skill level. They have a tendency to devalue themselves by not recognizing their talents. On the other hand, men account for their accomplishments by more stable causes such as personal proficiency.

Internal attribution composed of internal and external factors may be the primary cause attributed to women's unequal career development and progression (Hackett & Betz, 1981). The ability to self-promote has been much easier for men to complete, but women still continue to let feelings of incompetence and self-efficacy hinder their future in obtaining management occupations. The classification of business, whether it be public or private, does not affect the results indicated in the findings from the authors who have studied this concept.

Rosenthal (1996), a supporter of Weiner's attribution theory, also studied the effect of gender as it relates to their interpretation of subordinate work performance. She analyzed the relationship that exists between men and women in supervisory or managerial roles, and their employees. Her conclusions indicated that both genders reacted in a similar manner, attributing the success or failure of the subordinate to be dependent upon individual ability. Rewards and promotions were not assigned to those who achieved results with the aid of external factors such as luck or tasks that were not identified as difficult or challenging. This leads to the conclusion that the primary drawback for most women regarding their inability to attribute their accomplishment to personal skills is a key issue that must be addressed by business leaders, managers, and women who desire to

advance up the corporate ladder. The positive element resulting from this issue is that effort can now be made to alleviate this obstacle from the career path of women currently working or entering the job market. Although changing the mindset of women to be more positive and confident in their personal abilities will take time; it is a situation that can be remedied.

Based on the studies conducted on gender issues relating to the career progression of women, it would seem that an internal locus of control and self-efficacy are imperative to the future obtainment of managerial positions in any industry. If women continue to erect such obstacles, a discrepancy will continue to remain between men and women in management.

### Challenges for Women

Although women have made progress in the workforce, many problems still exist which hinder the attainment of equality for the female gender. Much of the literature addresses the existence of discrimination practices in today's workforce as being the main reason for the lack of representation of women in male dominated occupations and senior levels of management, and in the perpetuation of lower wages (Harriman, 1985).

Although many businesses continue to ignore or not to address such issues, women have found ways to work around the barriers and have developed their own methods that have proven to be successful in advancing their careers.

According to Rosener (1995), society evaluates all employees according to the characteristics associated with white males. He states that men are treated with more regard than women because they are viewed as aggressive and independent, while women

are believed to be more tactful, gentle, and quiet. For men, the completion of a masculine task is attributed to skill, but luck is the reason women complete the same task.

In an informal study of 100 men and 100 women, the question was asked, "Do you feel the underutilization of an employee differs depending upon the sex of the employee?" While most of the women responded yes to the question, the majority of the men said no. The women in the study felt they were devalued on two levels: personal and organizational (Rosener, 1995). The praise they received was often tainted with the expression of surprise, suggesting a lack of faith in their ability to perform at a professional level. Even simple factors such as clothing had to be carefully decided, because they were often judged as unprofessional by men and other women if their attire was too sexy or too masculine.

Policies and practices in most organizations inherently disadvantage women in regard to titles, promotions, task assignments, meeting formats, benefit packages, and reward systems (Gard, 1996). Findings show that the proportion of women in higher positions is low when compared to the total number of women in the workforce. Women who do advance are often seen as tokens, incapable of handling the responsibility of the position. Most are located in staff positions which lack budgetary and decision-making control.

Management positions within the United States manufacturing industry are occupied by women and men, but more female managers are found in companies that employ more female workers. Carrington and Troske (1998) refer to this gender segregation as the "pink collar" industry. Manufacturers who employ more women than men often pay their employees less than others who hire more men. An explanation for

the pay discrepancy was offered by Hirsch (1995) who argued that these companies pay low wages because they hire low-skilled male workers. The fact that women typically earn less per hour also contributes to the problem because their domination serves to lower the overall pay scale (Anderson & Shapiro, 1996).

Schwartz (1992) supports Carrington and Troske's (1998) research regarding the stereotypes that have been attached to occupations occupied predominantly by women. She identified another factor which is believed to provide evidence concerning why women still lack representation. Since women typically occupy executive positions in Human Resources and Public Relations, not Marketing or Engineering, companies and society have stereotyped these jobs as feminine. Schwartz stated that companies tend to place women into two categories: women whose careers are primary, and women who manage both career and family. She believes that companies should make concessions to each group. They should offer career women the same opportunities as men and be more flexible to women with families by allowing them more time off.

Critics of Schwartz state that her findings indicate that women must choose between a career or family. Others state that a company that is truly supportive of its diverse work force would try to accommodate everyone's specific needs, not play favoritism toward one particular group.

Motherhood brings another problem to women in business. They must decide to avoid becoming a mother, adopt a "father's" approach to child care, or seek alternative work hours and work forms (Kelly, 1991). So far few options have been developed that recognize the role of women who become both mothers and career women. The decision made often becomes the test of loyalty which organizations use in their evaluation of

women. The interruption of a woman's career is stated to be the major reason for the inequality of pay in comparison to the wages for men. Because time in service is one of the factors utilized in the decision process for increasing pay, women often are penalized for taking time off to raise their children and are not judged by the pertinent factors directly relating to their positions. Kelly concluded that in order to improve the situation, organizations must first reevaluate their criteria and create an appropriate female work model. They should stop trying to make women fit the traditional white male model.

A stereotypic view still exists that no woman or man would prefer to work for a woman manager (Grossman & Chester, 1990) due to the lack of her ability to remain unemotional in crisis situations. She is sometimes viewed as a "witch from hell" who is unapproachable and lacks the education necessary to perform the functions of a position in management. Lacking is the ability to be competitive and aggressive, failing to hold her own in situations involving other men (Jacobs, 1989). However, according to Bhatnagar and Swamy (1995), 17 studies were performed by Dobbings and Platz in 1986 that found no significant difference in male and female leaders when measuring traits such as initiating structure, consideration, and effectiveness. Other areas such as "problem-solving abilities" and "motivation to manage" appear to be similar rather than different among men and women.

Acceptance of the status quo by women has also aided in the maintenance of current discriminating practices that continue to prevent women from advancing in their careers. Learning to live with the way things are perpetuates a helpless, defeatist attitude and serves to support the view of women as victims (Tullett, 1995). Burke and McKeen (1996) agree that women often feel like outsiders in the male world and constantly deal

with stresses that place a heavy burden upon their shoulders. Until organizations change their acceptance of past societal views that discriminate against women, women's credibility will be compromised and they will fail to be seen as equals.

Making early choices that are not directed toward positions in senior management may disadvantage women early in their careers. Entrance into the workforce often begins in areas such as clerical, retail, catering, and so forth, which have poor promotion opportunities. Jobs in such areas are supportive in their function and not considered essential to the operations of the business. To circumvent the situation, women have learned to make out-spiraling moves by changing their employers or job functions, a traditional response to overcome dead-end jobs. However, this does not suggest that women must transfer to another company or organization in order to be promoted (White, et al., 1992).

Empowering employees in the workplace is a conceptual term and a common practice in most businesses that operate in the public and private sectors in industry. It has become an integral part of the language spoken by management, but remains subjective regarding the true essence of the word. For example, do managers empower their employees or do employees acquire the competency on their own? Lewis, in her article Empowering Women in the Workplace: Perspectives, Innovations, and Techniques for Helping Professionals (1998), focused on the role of the company's Employee Assistance Programs (EAP) which are offices organized to deal with issues that affect employee performance. Creating greater visibility for women's work related issues, challenging the narrow viewpoint of a large male workforce, and conceding that women face a different reality than men in their careers are three key empowerment elements. EAP officials must

communicate with the importance of the factor effectively with management in order to bring about change.

Lewis concluded that as the presence of women in the workforce continues to grow, the disadvantages associated with pay discrepancies, the glass ceiling, lack of recognition, discrimination practices, and other unfair practices are still occurring. Research indicates that unless managers work to recognize the differences between men, women, and minorities, gender and race equality will continue to exist.

The critical mass theory (Swiss, 1996) is said to be a tool for social change. It suggests that the presence of a large number of women entering traditional male occupations will aid in women's progression into upper management. The fundamental weakness of this theory is a catch-22: How can women break through the boundaries and get into higher management and change the rules when those very boundaries and rules prevent women from advancing into upper management?

The Equal Employment Opportunity commission (EEOC) definition of a hostile environment is any unwelcome conduct involving physical or verbal behavior that creates difficulty in an individual's work surroundings and results in disrupted labor production or supports an intimidating, antagonistic, or abusive working environment. As defined, Stoner, et al., (1995) conclude that this is an extremely subjective explanation that is difficult to interpret because individuals possess their own explanation of the rule.

According to the literature, women in the public and private sectors face many challenges, but the most universal factor is unwanted sexual attention by a superior or fellow co-worker. A study conducted by the Merit Systems Protection Board (MSPB) analyzed the sexual harassment practices reported by men and women who worked for

federal government agencies. The previous study conducted in 1992 indicated that a high rate of incidences occurred and approximately 44% were reported by women. The occurrences were classified as sexual attention that had more to do with remarks, jokes, and gestures. Guard's (1996) findings indicated that the new study conducted in 1994 by the MSPB did not reflect a substantial improvement in statistical numbers, even with the highly broadcasted harassment stories and increase in sexual awareness training conducted at federal agencies. She stated that although examples relating to assault or pressure for sexual favors were minimal, the existence of any form of harassment decreases the effectiveness and efficiency of employees. Actual charges filed for this conduct are also minimal because women choose to ignore the behavior or do nothing.

Even though many barriers still exist in business, there are some companies that are working to make changes. Engoron (1997) provided the example of Price Waterhouse as a corporation that has developed a more flexible career development model to better serve all employees. They have offered more agreeable work assignments that cooperate with the responsibilities of women, who still function as the primary caretaker of the family. It is hoped other businesses will learn from their example and work to create a place that supports the needs of all people.

In 1991 the United States Secretary of Labor, Lynn Martin, enacted a Glass Ceiling Initiative study that was designed to examine how corporations fill middle and upper management positions. The study focused on practices such as available development programs, training, assignments, and reward structures (Brooks & Brooks, 1997). The primary goal was to provide women and minorities with access to such positions, in combination with the individual's own abilities and work experience.



However, in order for this initiative to work, women and men must be willing to make the sacrifices that are required in order to advance into management.

Other governmental laws designed to establish equal employment opportunities for everyone are: Rehabilitation Act of 1973 - prohibits discrimination based on handicap; Age Discrimination in Employment Act of 1967 - prohibits discrimination based on age; Title VII of the Civil Rights Act of 1964 - prohibits discrimination on the basis of race, color, national origin, sex and religion; and Equal Employment Opportunity Act of 1972 - places the federal government under the provisions of Title VII, as amended

Sexual harassment and other forms of discrimination have become an international problem that are usually applied by superiors who have power over individuals and their careers. Wicks and Freeman (1991) stated that although countries have increased legislation, the problem seems to be more culturally ingrained, signifying that the environment of the society in which it is practiced must be positively altered before change will occur. Their view is supported by Golant (1993) who also believes that the legal realm has not been successful in eliminating or decreasing the number of reported discrimination cases. He stated that altering the customs and views of society was the only way to achieve equality.

### Summary

The study of literature relating to women in aviation management has revealed that although women are increasingly entering this predominantly male work force, there is still much to be learned regarding the characteristics and other factors that are possessed by

these individuals. The culture that presently exists in this environment is yet another element that may provide insight on a complex topic that few authors have written about.

Several books and articles have been written regarding women pilots which help provide the initial glimpse into the characteristics exhibited by the first women in aviation. Many of the traits identified were also found in women in aviation and general management occupations. Verges (1991), Swiss (1996), Bell (1994), and Henderson (1995) presented historical descriptions of these pioneers whose courage and determination helped pave the way for women in this technical field.

Findings from the literature seem to indicate that the qualities of women in management in public and private industries have more similarities than initially expected. For example, the personality characteristics associated with women in management in all fields indicate that most consider themselves to be competitive, creative, outgoing, and high achievers (White, et al., 1992).

In the book *Seven Secrets of Successful Women*, Brooks and Brooks (1997) provided a list of seven strategies that women in any industry should follow in order to progress into management. Other authors cited various studies that evaluated women in technical and administrative industries, all of whom provided methods, practices, and other helpful suggestions that women could utilize to enhance their career progression and, they hope, be promoted into management. Although women are increasingly being represented at the executive level, the percentage is not reflective of the number of women who currently are employed.

Findings discussed in the review of literature from Reis (1995), Mendell (1996), and Gard (1996) continue to reveal that three primary challenges are still being addressed

by women who work. Balancing family and career, gender related differences between men and women, and the discrimination practices supported by corporations and male employees are key areas that still require further research. These issues may not be resolved until current societal views are dramatically altered to reflect that there cannot be one universal mold from which all managers are defined (Garnsey & Rees, 1996). Our society is becoming increasingly diverse and will soon be equally represented in all facets of society.

According to Osipow (1983) in the book *Theories of Career Development*, there is a need for more longitudinal research in order to further understand the complexities faced by women.

## CHAPTER III

### DESIGN OF THE STUDY

#### Research Design

The design of this qualitative study was formulated to create an opportunity for gathering information consistent with the purpose of the study and the overall research question. What specific skills, abilities, attributes, and other characteristics do women who manage the Federal Aviation Administration's (FAA) Mike Monroney Aeronautical Center's (MMAC) aviation functions possess, which may have contributed to their career achievements in that field? The answers to this question may provide valuable insight not only for the MMAC, but could surface unknown variables for future study of women in aviation management as a whole. The findings from this study may enhance the limited information available in the literature regarding women in highly technical and male dominated environments such as aviation. The MMAC was chosen for the study because it provided a composite of almost every type of aviation organization, and its female senior management personnel would provide a rich source of data for studying women in a variety of aviation management roles.

In order to accomplish the task, a series of steps were identified which would address four broad research questions derived from the focus of the primary research question or purpose of the study. They were as follows:

1. What areas of individual development such as formal education, family background, and personal skills are most common for women who currently occupy positions in aviation management at the MMAC?
2. What work experiences aided in the preparation of women to progress toward a position in management at the MMAC?
3. What management skills evolved while performing the duties of a woman in aviation management and how can other women develop their talents to become qualified for a position in aviation management at the MMAC?
4. What major problems did women face as their careers progressed into positions of aviation management at the MMAC?

The selection of the sample, interview methods, instrumentation, and data analysis were all focused around these four broad questions.

### Selection of the Sample

Although the recommended sample size for a phenomenological qualitative study such as this one is 5 to 10 people according to Leedy in *Practical Research Planning and Design* (1997, p.162), this study was expanded from 10 to 14 senior level female managers at the MMAC in order to ensure that a variety of aviation management functions were represented. This expansion was permissible according to Miles and Huberman in

*Qualitative Data Analysis* (1994) because, “samples in qualitative studies are usually not wholly prespecified, but can evolve once fieldwork begins.”

Gay in *Educational Research* (1996) stated that sampling in a qualitative study is usually purposive, meaning that the sample is selected purposefully because it is believed to be a rich source of data. Patton in *Qualitative Evaluation and Research Methods* (1990) further stated that purposeful sampling in a qualitative study is used for maximizing utility of information. Selection of the sample for this study was purposive in nature in that participants were chosen based on two important criteria: (1) the type of organization managed and (2) the level of career progression achieved.

These criteria were deemed important to the study in that the MMAC has organizations that represent almost every type of aviation function including aviation education and training, logistics and maintenance support, aviation information management, procurement, engineering, and human resource management and administration. Managers are responsible for the activities of employees engaged in airspace maintenance and support, air traffic control, flight procedures and inspection, fleet management, aviation security, airport planning, aviation standards development, aviation medical and human factors research, airmen and aircraft registration and certification procedures, and so forth. It was determined that one or more interviews from women who had achieved a senior level management or higher position in each type of aviation function represented at the MMAC would provide the most representative base of aviation management responsibilities.

The senior or higher level position was important because it would provide the richest source of data regarding career progression in each of the different types of

aviation management functions. Senior level management at the MMAC could best be identified by pay grade. The MMAC pay grade is established by the federal government, and managers who have attained a grade of GS-15 or higher are considered senior level management. Their responsibilities generally involve second line or division level management of technical level employees. Managers above GS-15 include members of the Senior Executive Service who must complete an Executive Development Program and whose pay scale substantially exceeds the General Service pay scale. Their responsibilities generally involve managing the activities of several hundred employees who are involved in a wide variety of technical functions at one of the regional offices or centers.

A list of GS-15 and above female management personnel identified by organization and job title was obtained from the Human Resource Management Division. From that list, a minimum of one female manager was selected from each pertinent organization for interview. Only managers of organizations which were representative of an aviation management function were chosen.

### Methods

Because the study involved human subjects, a request for approval by the Institutional Review Board (IRB) was required prior to conducting the study (see Appendix C). The request was reviewed by the IRB and processed as exempt. Once the approval was received, subjects of the study were contacted by letter and informed regarding the purpose of the study and questions to be asked during the interview. The letter also asked for permission to tape record the interview, and subjects were given assurance that all information gathered during the interview would remain confidential.

A phone call followed two days after subjects received the letter reiterating the information in the letter (see Appendix A) and to schedule the interviews. The interviews were conducted by one researcher who obtained a signed consent form on the day of the interview. A draft copy of the study was furnished to all subjects, allowing for comments, prior to the submission of the study to the graduate college.

### Instrumentation

The instrument used in the study consisted of interview questions designed with the intent of gathering data related to the purpose of the study (see Appendix B). Open-ended questions were utilized to obtain in-depth responses to the questions and allotted the interviewer the opportunity to clarify any answers given during the face-to-face contact. The instrument provided the opportunity to retrieve verbal and nonverbal responses from the subjects in their own natural setting.

Although in a qualitative study, theory is said to be “grounded” in that it is developed from the data as opposed to being suggested by the literature and is an expected outcome rather a starting point for the study (Leedy, 1997), the review of the literature provided a valuable framework for development of the interview questions used in the study. Previous studies that were similar in nature to the topic of this dissertation provided a valuable source for reference in developing the questions. Once the questions were developed, they were reviewed and validated by a panel of academic and aviation experts including a former manager and employee of the MMAC, as well as various members of the researcher’s academic advisement committee.



## Data Analysis

The information gathered from the subjects in the personal interviews was recorded in written and audio documentation. Interviews were conducted on site in the subject's natural organizational environment. The researcher's personal observation of the environment combined with the researcher's notes regarding observation of the subject's demeanor during the interview and the verbatim transcription of the tapes provided some triangulation of the data.

The data was first compiled and separated into two broad categories identified as personal and career. Secondly, the data was separated into further sub-categories related to the following subject areas: education level, work experience, personal skills, individual goals, problems faced at work, and other sub-categories that were created from the responses to questions asked during the interview. These categories were consistent with the four broad research questions which would ultimately frame the organization of the data. The information was analyzed to conclude if similarities existed, and notations were made in regard to the need for further research, should it be necessary for this particular sample.

The data was then reorganized within the framework of the broad research questions and re-analyzed for all of its implications regarding women in MMAC management roles, and for possible new insights and theories which might contribute to future studies of women in aviation management in general.

## CHAPTER IV

### FINDINGS

#### Introduction

The 14 subjects interviewed for this study were chosen from female senior management personnel at the Mike Monroney Aeronautical Center (MMAC) located in Oklahoma City, Oklahoma. They represent a composite of aviation functions that support aviation education and training, logistics and maintenance support, aviation information management, procurement, engineering, human resource management and administration.

These women in aviation management were studied in order to determine what specific skills, abilities, attributes, and other characteristics they possess which may have contributed to their career achievements at the MMAC.

#### Demographics

Subjects chosen for interview are a purposive sample of 14 women from a variety of fields. Some of the individuals had a strong technical background in aviation and held pilot certificates and other ratings. Others progressed to their current level with no technical background or airman ratings.

The following narrative summarizes the comments of each interview as related to each of the interview questions. Participants were assigned a number in order to protect their confidentiality and will be referred to throughout this study according to that number.

### Research Question One

*What Areas of Individual Development Such as Formal Education, Family Background, and Personal Skills Are Most Common for Women Who Currently Occupy Positions in Aviation Management at the MMAC?*

#### Education

Manager 1. Manager 1 is responsible for organizational functions and 26 employees in an area that is associated with aviation education and training. She holds a bachelor's degree in Business Administration, but it took some time to complete the program. Manager 1 stated that her college education was interrupted, just before senior year, when she married a man who was in the military. His career required them to move frequently and did not leave much time to finish the education she started. However, once she started working for the Federal Aviation Administration, she completed her degree. A past supervisor, whom she fondly remembered, continually stressed the importance that a degree would have on her career. Manager 1 said she listened to his advice and completed a master's degree in Business Administration. She enjoyed her time as a student and is currently thinking about completing a doctorate.

Manager 1 believes her college education significantly impacted her career and views regarding the rest of the world. She stated that having an advanced degree

increased her chances for promotion, especially when she was the only female competing. Since males were her predominant competition, she had to have at least the same education credentials.

During her career, the majority of the people applying for positions at the FAA had a high school education, plus experience and training obtained on the job. Her master's degree proved to be very important when she advanced into her first management position because most of the competition had similar educational backgrounds. The gentleman making the selection was pressured to select a woman for the position, but he had difficulty relating to females. Manager 1 knew about the situation and attributed her appointment to that position to her gender and the graduate degree.

Manager 2. Manager 2 is responsible for employees who work in an organization that perform functions associated with aviation and education training. Oklahoma State University initially brought Manager 2 to the state of Oklahoma, where she began her educational track in the field of veterinary medicine. After one year in the program, she discontinued the path and directed her attention toward the field of engineering.

Employment in a development position within a technical environment provided her with an incentive to pursue a degree that was associated with her particular occupation. In order to progress in her career and qualify for a management position, it was imperative that she obtain a formal degree in engineering. People in the organizational environment preferred engineers with degrees and tended to promote individuals who possessed a college education.

Manager 2 began the learning process in a program called the Electronic Technician Qualification Program, training considered to be equivalent to an associates degree. Formal certification was gained through a community college and later completed at Oklahoma City University with a bachelor's degree in Science, majoring in physics.

The decision to obtain a graduate degree was encouraged by the education level that most managers had acquired. She believed that education was a key element in obtaining a management position. Manager 2 completed a master's degree in Aviation and Space Education from Oklahoma State University and is presently enrolled in the doctorate program under the same major. She believes the subjects covered in the program are applicable to the aviation industry.

Informal educational courses were predominantly equipment specific, but other courses involving soft skills training were facilitator training, labor relations, conflict management, and so forth. This manager has her pilot's license, but has not actively flown in recent years. She completed an instrumental course for management preparation called the Department of Transportation Secretary Seminar for Prospective Women Managers, sponsored by Elizabeth Dole. It helped future managers prepare for the responsibilities associated with their leadership positions.

Manager 3. This individual manages approximately 1,700 employees and has support responsibility for contractors, 500 students, and 11 tenant organizations. Manager 3 has a bachelor's degree in Merchandising and Marketing that she stated was unusual for someone in the field of aviation. However, the marketing component of the

degree has proven beneficial because she often utilizes this knowledge when selling or presenting a product or service to others.

She continued her education and completed a master's degree in Aviation and Space from Oklahoma State University. Manager 3's curriculum focused on leadership because she believes it complements her present position and provides an important technical emphasis.

Informal education was acquired in various FAA sponsored programs such as Kellogg and the University of Michigan graduate school of business, which is commonly referred to as a mini MBA. She attended several candidate development programs that helped develop skills for management personnel.

Manager 4. This manager is responsible for a total of 60 employees, 33 full-time and 28 contract workers in an organization responsible for aviation information management. Manager 4 has a bachelor's degree in Business Administration, with an emphasis in marketing. She completed several informal courses including: facilitator training and Myers Briggs Personality Indicator, certified instructor. These two skills were highly regarded by Manager 4, who stated that the practicality of the information enabled her to work effectively with teams.

During her career in Acquisition, she learned how to efficiently negotiate contracts and has carried this knowledge into her present position. A substantial amount of education has been acquired from course work provided by the government and experience acquired on the job. She believes it is extremely important for an individual who wants to work in management to learn the overall mission of the Center.

Manager 5. This manager is responsible for a staff of professionals, highly technical engineers and health specialists, who ensure a healthy, safe environment for employees at the MMAC. Manager 5 initiated her formal educational career to obtain a bachelor's degree, but grades forced her to reevaluate the situation, and she exchanged this pursuit to join the Air Force. In her opinion, it was the best thing that could have happened. At the time, the military was trying to recruit more women into technical fields. The scores she received on an aptitude test in math and science persuaded superiors to place her in the field of electronics where she was one of few women.

During the educational program for this field, Manager 5 received positive and negative reactions from other personnel. She was informed by a particular sergeant, responsible for her education, that he expected her to fail. Instead of believing his words, she took his comments as a personal challenge and utilized her natural technical skills to work hard to achieve success. At this time she was fortunate to have worked in a one-on-one relationship with an engineer who valued and complimented the capabilities she possessed.

Manager 5 stated that it is important for people to distinguish between aptitude and intelligence because they are two different attributes. She believed that in order to be successful in a career, individuals must have the ability perform the functions of the occupation. Otherwise, they may struggle and become frustrated with feelings of being inept, when, in fact, they are probably in the wrong career field.

Training received from the Air Force was considered to be equivalent to an associate's degree and qualified her as an instrumentation mechanic. She later returned to college and completed a Bachelor of Science degree in physics.

Manager 6. This manager is responsible for a total of 45 employees in an organization that involves human resource issues for Center and tenant organizations at the MMAC. This manager received her Bachelor of Liberal Arts degree in psychology from the University of Central Oklahoma, Edmond, Oklahoma. Informally, she attended numerous technical courses that were applicable to the area of personnel. Most of the material focused on subject matters that were classified as soft skills such as team building and advanced classification. However, the most valuable learning experiences were gained when she participated on Center work groups.

According to Manager 6, practical information can be gained from working with other people within your own organization, but also with individuals located at other regions and Headquarters. Her participation with a broad range of people proved beneficial and enabled her to learn a great deal about the Agency as a whole.

Manager 7. Manager 7 was responsible for employees in an organization that performed human resource functions for the entire MMAC and tenant associations. After attending college in the degree program for business management, Manager 7 completed course work up to the sophomore level, but later separated from the university environment. Although she has not obtained a formal educational degree, this manager achieved learning through other informal sources such as the University of Oklahoma Executive Program. In her opinion, the educational environment provided the opportunity to interact with managers from various organizations, both public and private. It provided a wonderful environment to learn how other managers dealt with issues that affected their positions.



Manager 7 believes that a great deal of learning relevant to a managerial position can be gained by getting involved in activities that help people learn about the organization in which they work. For example, Manager 7 enrolled in courses offered by the FAA that were relevant to her position and provided the opportunity to gain the knowledge that would enable her to achieve specific career objectives.

Continual learning is a lifetime process that Manager 7 believes all managers should actively seek. She has known managers who completed formal degrees over 20 years ago, but have failed to attend any recent form of educational course work. Managers must understand that organizations are constantly changing. In order to progress through such evolution, education must play an important part in helping to prepare for the future of the organization.

Manager 8. This manager is responsible for employees who work in an organizations in aviation education and training. Manager 8's original intent was to complete a bachelor's degree in Latin-American Studies from the University of New Mexico, but her circumstances changed, bringing her to the Agency in Oklahoma City. She completed the degree at the Oklahoma City Community College and Oklahoma City University. Later she returned to school to obtain an MBA, but discontinued this pursuit due to the air traffic controller strike.

Because air traffic control is a highly technical field, the degree obtained by Manager 8 did not significantly impact her career. All that is required to begin in air traffic is a high school diploma. She believes that her formal education provided the ability to see the big picture and understand things from an analytical position.

The training that assisted Manager 8 in her technical career was the completion of a private pilot's license. The Civil Air Patrol (CAP) had a program entitled Aerospace Education, which helped young people learn about aviation. This particular program was the primary influence in her pursuit of a license and taking the air traffic controller exam. Her airmen certification and participation with the CAP helped support her understand of aviation, and increased her ability to see beyond how to move a plane. She became more knowledgeable regarding navigation and the operations of systems.

Manager 9. This manager is responsible for 85 employees who work in an organization that performs procurement services. Although Manager 9 did not have a bachelor's degree before working in management, she is currently completing a degree in Liberal Arts from the University of Oklahoma. She chose a social science major because it provides valuable learning and nourishes the soul. She values continued education and improved her knowledge by extensively reading books in various subjects. Without a bachelor's degree, she had to work harder to prove her abilities, in order to progress in her career. In her opinion, the certificate provided a form of validity in the workforce.

The educational standards for individuals entering her organization have increased in the last two years. In order to work in Acquisition, an employee must have a bachelor's in business or a related field. Progression above the GS-12 level requires a degree plus 24 hours of business or a master's degree. Manager 9 entered management before the new standard was implemented.

In the past, career progression was accomplished through the increased complexity of work, but the present operation of government has demanded a new process. In her

field, education has become increasingly important and is required in order to work and advance.

Manager 10. Manager 10 is responsible for 12 contract workers and 85 employees in the association responsible for procurement services. The formal education obtained by Manager 10 is a bachelor's and a master's degree in Business Administration. She attended night school for over ten years to acquire the education, due to her own choosing and pressure from superiors. Training programs offered by the government were few in number, primarily due to the lack of available funds.

As a single parent, Manager 10 knew she needed a formal education and learned quickly in order to provide for her family. She knew a degree was important because the lack of this credential would severely limit her career opportunities in the organization. Although having the degree is important, the learning acquired during this time was very valuable. Oral presentations and organizational skills were developed through this process, but the most important element was self-discipline. During the time spent in the classroom, Manager 10 worked full-time, maintained 9 hours of course work per semester, and took care of her child. It was difficult, but she believed it was worth the time and effort.

According to this manager, an individual will learn more from the college experience than just the information taught in the classroom. People learn from one another because everyone brings their experiences into the room. She valued the connections made during this process and communicates the knowledge to her employees.

Manager 11. Manager 11 manages over 175 full time employees and approximately 275 contractors, in an organization responsible for computer operations. This manager stated that after graduating from high school, she went directly to work and did not immediately go to college because she was “dirt poor” and needed to find a job. Since her family could not afford the cost and had not emphasized the need for her to obtain a formal degree, she immediately began her federal career and attended night school at OSU-Technology Center. Manager 11 took courses in computers, but did not fully complete a degree program. Marriage and the current success she was having with her career progression seemed to indicate that college was a lesser priority.

Manager 11 believes that education is very important and continues her own learning by extensively reading material that helps develop her personal and professional skills. She believes that an individual should never stop learning because things change all the time. In her career field, she must remain current in order to ensure the success of her people, the organization, and its customers.

Manager 12. Manager 12 is responsible for 38 employees in an organization responsible for aviation specialized training. When this manager graduated from high school, she was offered two scholarships to attend college out of state, but turned both of them down because she did not want to leave her home. Her parents were supporters of higher education, but could not convince Manager 12 to attend college. Eventually, Manager 12 completed a Bachelor of Arts degree from a university in West Virginia. In her opinion, “lessons learned in the school of life” coupled with experience help to prepare a person to be successful.

Manager 13. This manager is responsible for technical functions associated with personnel and payroll data. She has 32 full time employees and 32 contract workers that perform functions that primarily support offices in Washington, D.C., and human resources.

After graduating from high school, Manager 13 married and began raising a family before attending a formal educational program at a university. When her husband transferred to Oklahoma City, this manager attended a community college where she completed an associate's degree. Although the majority of her course work was in mathematical courses, her degree major was categorized as "specialized" because, at the time, the school did not have a mathematics program.

Manager 13 is a strong supporter of continued education and has emphasized its importance to her children. While they were growing up, this manager participated in their learning by directing them to enroll in courses that would increase their knowledge and provide a challenge. She stated that her children were told "they were going to college" and were not given the opportunity to say no. At this time, all three have received degrees from the University of Oklahoma

Manager 14. This manager is responsible for a technical organization that performs functions involving engineering, electronics, and management. She manages approximately 61 full-time employees. Manager 14 has completed two years of formal education, but did not continue her degree program because she believes her first priority should be to the needs of her family. She commented that although she is happy with her decision, she regrets never completing a bachelor's degree because without the formal

certificate, it was harder and took longer to progress in her career. She attributes her work experience as the primary reason for her ability to advance into management.

### Summary

The educational background of these women seems to suggest that the possession of a formal degree, at least the bachelor's level, is necessary in order to be selected for a management position at the MMAC. The education majors do not indicate that a purely technical field of study, such as engineering, is required, except in specific areas. Although four of the individuals did not have a degree, they did indicate that it took longer to advance into management without the formal certificate.

### Family Background

Manager 1. Manager 1 grew up in a small town in northwestern Oklahoma. Her father died when she was 12 years old and her mother, as a single parent, provided a strong influence. Her mother often counseled her on what she called "management skills" and encouraged her to do whatever she wanted. Her mother encouraged her independence, and had a significant influence on her personality in a positive way.

Manager 1 also mentioned a couple of teachers that were very encouraging, one of whom was a 4-H agent. This teacher was very young and came from a background similar to hers. She was the first woman about whom Manager 1 had thought, "I could do what she is doing." Manager 1 attributed 4-H with helping her to conquer her fear of public speaking and meeting people. Finding employment was difficult in a small town, so she harvested cotton and watched children for money.

Manager 2. Manager 2 grew up in a supportive environment where her parents provided a positive influence on her development. Growing up as an only child, she received a great deal of attention from her mother and father. Traditional gender activities such as working on cars or baking cookies were not distinguished as being male or female. She learned that boundaries were not designated; the opportunities were limitless.

Since her mother worked outside the home, it was considered “normal” that women had careers. Her mother served as a role model and encouraged her to be anything she wanted. Manager 2’s parents never expressed any restrictions that would hinder her personal growth. Although neither parent had a college education, it was understood that she would go to school to acquire a bachelor’s degree.

Manager 2’s first interest in aviation was expressed in high school when she talked about her desire to attend the Air Force Academy. A counselor and Air Force recruiter discouraged her interest, informing her that women were not accepted into the program. They indicated that a career would not be available to women, even in the future.

Manager 2 wished she had not listened to their opinions; in 1973, the Air Force Academy accepted its first class of female cadets. She stated that placing restrictions and letting others exert control may cause an individual to miss out on an exciting adventure. People should not let others determine their choices in life. It is important to maintain a determination and do it anyway.

Manager 3. Manager 3 grew up in Santa Fe, New Mexico. The younger of two girls, she was considered to be easy going and the one most likely to marry and have children. Her parents provided a solid family foundation where she felt comfortable being

herself. Being shy and somewhat unsure of herself imposed some restraints. In time she gained confidence when she moved away to attend college.

Manager 3's father had his pilot's license and encouraged her to learn to fly. She was not sure if aviation held her interest so she did not pursue his advice. Looking back she regrets not acquiring her license, but is pleased she eventually found her place in the industry.

Manager 4. Manager 4 is the second of two children. She has a brother who is a few years older. Her mother was the primary parental influence during her childhood and taught her that she had the ability to accomplish anything. Manager 4's mother wanted her to work for the government directly after high school, but she chose to attend college before starting at the MMAC.

A high school teacher that had a positive influence on her life told her "not to be ordinary." His words remained in her memory.

Manager 5. As the first girl in the family, Manager 5 grew up as a middle child in a small town in Washington state. She believes the experience of growing up in a small community impacted her life. In her opinion, an individual who lived in this type of environment became closely associated with a lot of people, and built strong, personal relationships.

Her grandmother, whom she considered to be a liberated woman, lived behind the family's residence and was an important part of her childhood. At that time her grandmother worked as a fire-watcher, a position that was traditionally performed by a



man. Seeing the various occupations her grandmother performed greatly influenced Manager 5 and showed that she could grow up to be anything in life.

An uncle lived with the family during her years in high school and quickly became a best friend. Their relationship developed out of mutual respect because he treated her as an equal. He took the time to recognize her intelligence and provided positive encouragement. Manager 5 fondly remembers the contributions he made to her life and is appreciative of the influence.

Manager 5's mother and father were supportive during her childhood. Her father did not separate activities by gender. He encouraged her to try anything and everything. Parallel to his influence, her mother expressed a sense of regret that the opportunities had not been available to her as they had been for Manager 5. Manager 5 commented that she had to work to achieve the opportunities; they did not just happen. She told her mother that the door is open to all women, not closed for the older generation.

Manager 6. Manager 6 was the middle child of three girls in her family. Growing up in Pennsylvania, she received support from her parents, but especially her father who encouraged his daughters to go to college. As an engineer, her father knew the value of an education and passed this on to all of his children.

After high school, Manager 6 worked for a couple of years before she decided to continue her education. Although her father had a technical background, she pursued an interest in human subjects and majored in psychology.

Manager 7. Manager 7 was the elder of two daughters. Her father died when she was only 15 years old which left her mother with the responsibility of raising two young children. Having earned a bachelor's degree in Business Administration from the University of Central Oklahoma, her mother was able to support the family by working at a local bank. She worked in the accounting department and served to "set an example" for her daughters. Manager 7 believed her mother served as a valuable role model because of the way she lived her life. "It is important to think of what you want to be" was a phrase her mother instilled in her memory. It taught Manager 7 that it was important to prepare as much as possible for whatever the future might bring. Individuals should plan and have an understanding regarding the direction they want their lives to follow.

Manager 8. Manager 8 was influenced by several people during her childhood. Her grandmother taught that life was full of opportunities. She could do anything and be anything she wanted. This support caused her to not set limitations based upon gender roles.

Aviation was a familiar environment because exposure to the business started early. She stated that both parents held pilot's licenses. The fact that her mother acquired her certification in her 30s, with two children, served as an example that nothing can become a barrier to achieving a goal. She credited her father with her development of high achievement standards and competitive nature.

Manager 9. Growing up in Oklahoma City, Manager 9's father had a master's degree in Industrial Engineering from Oklahoma City University. He was the only family member to have graduate training, but did not transfer the importance to her. Looking back, she wished her family had influenced the need for continued education. She believes a family influence is very important and has the power to affect young children. Parents have the opportunity to point young children in a direction that would prove beneficial to their future.

In her own family, Manager 9 has an only child whom she encouraged to obtain a college education. He completed his degree in 1993 from the University of Oklahoma.

Manager 10. This manager was an only child raised in Enid, Oklahoma. At the age of 10, when her parents divorced, she moved to Denver and remained there until after graduation. Although this was a traumatic time in her life, she remembers the strong influence her mother provided. Manager 10 stated that her mother was an independent woman who was very resourceful in terms of raising a child by herself. While her mother worked as a clerk at the county courthouse, Manager 10 would spend the day watching. She wanted to be just like her.

Another influential person in Manager 10's life was a former supervisor whom she viewed as a role model. This woman always provided a positive outlook and taught her that "there is not a mistake that cannot be corrected." Over the years other people have made positive contributions to her life that helped her personal and professional development.

Manager 11. This manager grew up in a small town in Maysville, Oklahoma, and couldn't wait to leave because she wanted to do something with her life and would not be able to accomplish her goals if she stayed in this town. Her older brother had left to join the United States Air Force and influenced her to try the things she enjoyed. She remembered having disagreements with her parents while growing up for one reason or another, but indicated that she learned a lot from them. They promoted a strong work ethic and taught her to treat others with respect. They also emphasized to finish whatever she started and never quit. Manager 11 stated that their teachings provided her with a good foundation that helped build her confidence and enabled her to work hard to be successful at the things she tried.

Manager 11 initially focused on the responsibilities at work and spent more time at the office because of her concern for the success of the organization. Over time she learned that it is impossible to "do everything" and works to create a balance between her roles as a wife, mother, and career woman. Manager 11 stated that her responsibilities as a manager does require more time in the office than her previous positions.

Manager 11 commented that other women in aviation management have mentioned similar struggles to try and balance their lives. They feel the "burden" of the responsibility to be the nurturer of the home and family. She said that most women have difficulty with family issues when children are small because of the various problems that arise during this time period. She rarely hears men complain or talk about such issues or sees them leave a meeting to pick up their kids.

Manager 11 said that women currently in management are more comfortable leaving to handle family responsibilities. She stated that maybe the discomfort was placed upon her shoulders by her own accord.

Manager 12. Growing up in New York, Manager 12's father, an electrician, worked at the Naval yard and her mother stayed at home and managed the family responsibilities. She stated that her father felt that it was his wife's role to stay at home and raise the children.

In her own family, Manager 12 raised two children, which caused her to gain respect for parenthood because she learned how difficult it was to have a family and career. Growing up, she was taught the importance of home cooked meals and tried to perform the same practice in her own home by preparing all meals from scratch. She didn't believe in "fast food," but learned to change her mind because she was becoming overworked by trying to perform the responsibilities associated with her numerous roles. During this time in her life, Manager 12 reevaluated her idea of parenthood and adjusted her expectation in order to release some of the pressure she experienced.

She stated that early childhood was the most difficult time and caused the most stress in her career. It was hard to find adequate daycare, and illnesses seemed to always plague small children. These examples provided added pressure because she did not have any family in Oklahoma City to provide support. For some time, Manager 12 made the decision to put her career progression on hold due to family illness and other situations. She noted that her position with the federal government allowed her to take a four-month

absence to care for family responsibilities. When she returned, she was able to work at the same job.

Manager 13. Manager 13's value of education was strongly influenced by her mother and grandmother, who were both schoolteachers. She commented that several other relatives had degrees in education and may be the reason she strongly supports continued schooling. During her childhood, she stated that if women wanted to work, they were employed in traditionally female occupations as clerks or teachers. She stressed that her mother and grandmother were extremely bright, strong willed, and very supportive to her. Manager 13's father was employed in civil service and was one of the reasons she chose to work for the government. However, in his opinion, women did not belong in the workforce.

While raising her own family, she found it very difficult to attend school and maintain her responsibilities. Manager 13 commented that with the help of a supportive husband, she was able to manage the activities that required her attention.

Manager 14. Manager 14's family traveled at length during her childhood because of her father's work with the railroad. She enjoyed moving to new locations and meeting new people, and still enjoys visiting new places when her management position requires her to travel for business purposes.

She was close to her father, who she considers to have been the biggest influence in her life. Her mother did not work, but was highly admired by Manager 14 who stated that she had a close friendship with her mother because of their common interests. Based

upon the words she used to describe their relationship, Manager 14 admired and respected the effect her parents had on her life.

Manager 14 did not take a career break during the time when her two children were born. The initial 5-7 years of her career was primarily focused on the responsibilities of her job because she believed it was a critical time period when she had to prove herself in order to be promoted at the MMAC. She stated that she tried to be a “supermom” in every aspect of her life, but was informed by her daughter that she had not attended any of her school functions. This comment changed her priorities and caused her to place family first.

Manager 14 said that she learned how important it was to have a balance in life because too much attention on one role creates problems. When she and her husband come home from the office, they are strictly parents and do not let the responsibilities at work invade their family environment. She believes this presents her children with a positive influence because they see their parents working together, supporting each other.

### Summary

The majority of members included in this study seem to have experienced a positive relationship with their parents, but most indicated that their mother was the primary influence and provided words of encouragement to help develop their confidence. A few spoke regarding the effect their own family had in relation to their careers. It seemed that early adolescence was the most influential time period when children created the greatest professional stress.

## Personal Skills

Manager 1. Manager 1 perceived her best quality to be fairness and cites her position as a personnel specialist as an example of her ability to treat everyone the same. She never took care of her friends to the detriment of other people. She was consistent and communicated easily with most people. Manager 1 believes her desire to produce and be of service to customers is very important because most of the occupations at the Aeronautical Center are service oriented.

Manager 2. Manager 2 believes her ability to “break new ground” and “step on the cutting edge” are two of her best attributes and have been instrumental in her professional development. These skills helped her career progression and advancement into a management position.

The ability to prosper when dealing with change also helped Manager 2 be successful in dealing with the operations that exist within her organization. Analyzing current practices and creating new methods are excellent trouble shooting skills that helped Manager 2 improve business methods. She expressed how important it is to change things for the better, not for the sake of change itself.

Being creative is a personal attribute that has been identified by her peers. She originates new ideas and is not afraid to try new things. “Doing things just because that is the way it has always been done” is not a motto to follow. Manager 2 believes it is important to “think outside the box.”



Manager 3. Manager 3 stated that she genuinely liked people. The ability to listen and communicate effectively with others has been extremely important in her role as a manager, but she was not born with such skills. They were nurtured and developed through years of experience.

Honesty, such as the ability to “tell it like it is,” is a quality that has earned her a highly regarded reputation. She does not believe that a manager must be forceful when presenting a point, but she expressed that a manager must always remain focused on the heart of an issue.

Manager 4. Listening to people and observing body language are two attributes that Manager 4 stated were her best talents. She had a strong interest in people and classified herself as a “people watcher.” As a manager, she encouraged employees by utilizing positive feedback that focused on their individual talents.

Being certified in Myers Briggs has proven to be useful when dealing with employees in her organization. Knowing the personality of each individual has provided Manager 4 with the ability to understand “how” she should present work assignments. This skill enabled her to proficiently coordinate with each individual in a way that benefits the entire group.

Manager 5. According to Manager 5, her ability to be positive is one of her greatest strengths. No matter the situation, she strives to find the “bright side” and refuses to think negatively. However, this skill was not always present; it had to be cultivated. She stated that earlier in her career, she tried too hard to emulate the personalities of others, but soon learned it was hard not “being herself.” Manager 5 did not indicate a

particular time or example that caused her transformation. Over time, maturity and experience taught her it was more important to be authentic and show everyone her true self. She stated that it was futile to try to please everyone; it is an impossibility.

Throughout her career Manager 5 stressed the importance for individuals to conduct an internal evaluation to review their reaction to stimulus, handling of situations, and the attitude they present to others. She believes that by taking an introspective look and evaluating how others are affected, a person can discover great insights. The information gained can later be changed if necessary to ensure personal or professional growth. She noted that understanding personal weakness is only one part of the equation. Being willing to change requires true acceptance and commitment to improve. Otherwise, a superficial “mask” is formed.

Other skills that she developed and improved are aptitude and intelligence for technical knowledge. Manager 5 stated that over the years she worked to sharpen her skill level. Such talents enabled her to successfully perform the functions of the position for which she was hired. She believes people need to be careful working in positions that require a higher skill level than they currently possess. The inability to handle the job will become readily apparent if the person is not already qualified.

Manager 6. This leader believes she is a good listener and stated that other people have complimented her on having this quality. She stated that her knowledge of personnel has earned her a reputation for providing accurate information.

Manager 7. The ability to adapt to change is one of the attributes Manager 7 believes was her best quality. Because the organization in which she worked was constantly facing new challenges, she chose to view them as opportunities, a chance to make a difference. Her ability to be a risk taker served her well in an environment that drew upon her creative talents. She was able to develop new methods for conducting business and was successful in accomplishing organizational tasks with less money and fewer people.

Manager 7 has been told by peers and other executive leaders that she possesses the ability to “keep a secret” regarding sensitive information that is often viewed in her management position. The ability to understand her role within the Center has earned her the reputation of being a credible person who actively worked to develop collaborative relationships with other managers and fellow organizations. Her honesty helped build professional relationships with others.

Manager 8. Early in her career, Manager 8 completed the Myers-Briggs Personality Indicator and is intrigued by this personality test because it provided insight regarding the needs of individuals. One personality type is not necessarily better or worse than another; it merely suggests that everyone reacts differently for various reasons. Although she requires some private time, she receives energy from the people with whom she comes in contact. Manager 8 considers herself to be a strong analyzer and this may account for her ability to not take things personally.

This manager is intrigued by how people are motivated. The ability to place herself in another person’s place is a practice that is reflected by her true concern for

others. She is not concerned with self-achievement because her needs have already been met. The pleasures in seeing others succeed is enough of a reward.

Manager 8 considers herself to be very trustworthy and capable of keeping private information in confidence. This skill was acquired over time and has proven valuable in her role as manager.

Manager 9. This manager identified loyalty, dedication, thirst for knowledge, and the desire to do her best as positive qualities that she possesses. She has been fortunate to work at the Center and believes the Agency's environment encourages people to be themselves.

Manager 9 is appreciative of the promotions she has received and has worked hard to show others that she was the right candidate for the job. As a supervisor, she learned to oversee organization functions, but soon discovered that a manager required different skills. In her opinion, a manager must know how to work with various personality types.

Manager 10. Manager 10 stated that she considers herself to be a hard worker who gives 200%, and has the wisdom to maintain balance in her life. When she goes home at the end of the day, she leaves the work at the office. However, in today's age, she believes that too many people do not possess this ability.

She is dedicated to the organization and is supportive of the people who work there. Manager 10 stated that it is important to be honest with employees because they deserve to know the truth, but there are some managers who do not exercise this skill. In her position she strives to speak her mind without offending others.

Manager 11. This manager stated that she possesses excellent people skills and incorporates this ability in her present position. She strives to provide opportunities to her employees and supports activities that will help them accomplish results. As a manager, she understands the importance regarding the recognition that should be awarded to employees for a job well done.

Manager 11 is proud of her “open door” policy that allows employees to visit with her at anytime to discuss personal or professional problems. Her ability to be responsive to their needs has been appreciated and recognized by them. She stated that if she is unable to provide answers to questions, she searches to find solutions or locates someone who does know. Her ability to communicate effectively when discussing technical terms has enhanced her effectiveness during presentations to customers.

Manager 12. According to this manager, she possesses strong visual abilities and is able to empathize with others. When listening to comments, Manager 12 has the ability to delve deeper into the information presented and is able to explore and analyze for greater understanding. Other skills identified were: honesty, openness, flexibility, tactfulness, and truthfulness. Manager 12 stated that although she is a recovering perfectionist, she understands the limitations of this skill and has made improvements.

Manager 13. According to this manager, she believes that her ability to be fair regarding the treatment of employees is one of her best qualities. One of the skills she has learned is the ability to change. In the organization where she works, processes alter quickly, and Manager 13 has to be able to meet the challenges that this often brings.

Manager 13 concluded that her ability to motivate people is another personal skill that has been helpful in her managerial position.

Manager 14. Manager 14 believes that her curiosity and willingness to learn everything possible regarding the operations of her organization has increased her desire to accomplish great things in her career. Her ability to understand how business works and operates, and the human element involved in managing people, has proven to be a valuable tool in her managerial role. The responsibilities of the position have helped her develop the ability to think on her feet, utilize her writing skills, and make public presentations; qualities that seem to come easy for Manager 14.

### Summary

Most of the findings in the study identified skills that are traditionally associated with personnel skills such as: communication, negotiation, supportiveness, and other factors that involve human elements. The women seemed genuinely concerned for the welfare of their employees and success of the organization.

### Research Question Two

*What Work Experiences Aided in the Preparation of Women to Progress  
Toward a Position in Management at the MMAC?*

## Work Experience

Manager 1. Manager 1 described herself as having a “management attitude,” because she believes in the needs and rights of the individual and the organization. She believed that the requirements of the organization should accomplish the mission set forth.

Manager 1’s first 16 years in personnel management provided great training. Her experiences in labor relations regarding conduct and discipline issues were valuable and helped her understand the responsibilities of management in these situations. In her role as a counselor for labor issues, she had the opportunity to understand the personnel system and learned why so many employees were unhappy in their employment. Working in personnel management provided her with experience in other areas such as performance management and staffing. She believes her combination of experience made it easier as a manager to handle people issues. Technical skills can be learned, but people skills must be experienced.

When asked if she saw any difference in regard to managers with only technical experience and others involved in the human resource fields, Manager 1 responded that managers from the technical side become more frustrated with human issues that often arise.

Manager 1 credits herself with having the proper education at the right time. She believes that these two elements together worked for her benefit. When she was promoted from a personnel management specialist to a managerial position in another agency, she handled the accounting, budget, space, property, and other responsibilities. She described her position with the organization as a unique experience in that “it was a

reimbursable activity,” meaning they did not receive money from the federal budget process. The organization must sell what they do. This organization increased her qualifications and set her apart from other competitors. It contributed to the selection for her current management position.

Manager 1 also emphasized the importance of dressing and acting the part. She believes that an individual who wants to progress in his or her career must develop both internally and externally in order for superiors to visualize him or her in a management position.

Manager 2. The greater part of Manager 2’s work experience was initially acquired as a secretary in an organization responsible for aviation education and training. She progressed within the Center and soon moved to the logistics department. Her career development has continued in the technical realm, and has been comprised of various positions within the same field. She gained exposure to diverse systems that comprise the National Air Space System in order to understand how each part fits together. This experience broadened her understanding regarding how each organization impacted the other.

The developmental position in logistics provided experience in dealing with test equipment, circuit boards, communications, radar, and automation. Manager 2’s trouble shooting skills enabled her to work in several areas where she became skilled at pinpointing and providing solutions to problems. Talents acquired while working in such areas furnished her a better view regarding the operations of the Center and the FAA.



Manager 2 also worked as an instructor in the area of aviation education and training and became a nighttime supervisor who managed classes conducted during evening hours. She talked with the Superintendent of this organization regarding her desire to increase her work skills, which led to her receiving a recommendation to serve on a special detail that was organized to develop CBI platforms for the entire FAA. During this one-year project, Manager 2 worked with Security and Air Traffic. When her present management position opened for bid, her past education and experience qualified her for the leadership role.

Manager 3. In the beginning of her government career, Manager 3 learned many valuable lessons that have never been forgotten. She started out at the GS-3 level in a temporary position and gained a unique perspective by starting at the “bottom.” In her opinion, managers that started from this viewpoint were fortunate to have acquired such experience. It provided an understanding that cannot be explained, but must be encountered.

Although credentials are important, Manager 3 stated that “paying your dues” plays a part in career advancement, but it is dependent upon where a person begins in the organization. Progression through levels in government provides an education that is valuable and sometimes unattainable if an individual does not begin in the lower grade levels.

Manager 3 worked in the voucher examining area, but did not particularly relish the experience. She learned how important it was to work in a position that is enjoyable.

People should progress toward occupations that draw upon their strengths and talents because it will enable them to be more competent.

After moving to Corpus Christi, Manager 3 competed for a position as a Navy Management Intern and was selected for the job. She considered this job to be a major turning point in her career because it removed her from the clerical field and brought her into a personnel management specialist position. Her entrance into this field was a confidence builder and a perfect match for her skills.

Over time, her career continued to progress upward and she acquired a GS-11 with the Navy as a supervisor. She eventually transferred to the MMAC and worked in compensation where her superiors learned she had a variety of experience in labor relations, staffing, and training that was had been gained during her time with the Navy. When Manager 3 was promoted to a supervisory position in classification, she learned what it was like to supervise people who had previously been peers. She stated that it was important to remember "You never know who you will be working for, so be careful how you treat people. They may end up being your boss."

In time, Manager 3 was in charge of a human resource organization and remained there for five years. She also completed two extensive details in Washington at the Senior Executive Service level and managed the Organizational Development Program for the Agency. This exposure provided her with additional experience and developed her ability to handle responsibility. Later, Manager 3 received encouragement from her superiors to apply for the first Candidate Development Program for which she was accepted. She qualified for the position because of the knowledge acquired from working on national

projects. Her understanding of the Agency as a whole provided a wider perspective, a key factor to progress upward within the Agency.

Manager 3 stated that the experience gained by moving out of a career area is important if an individual desires to progress into higher levels in management. To remain in one area may result in an individual becoming stereotyped. As an executive in the Candidate Development Program, Manager 3 stated that this helped her in being selected for the position of Deputy Program Director of the Logistics Center where she worked for three years and gained a wide variety of technical skills. Manager 3 never regretted the decision to work in Logistics because it helped break the stereotype that she was strictly a personnelist.

Eventually, Manager 3 was asked by a tenant organization to become their Deputy, a surprise because she would be the first female and first non-pilot to be in the position. She learned that the environment was very different from what she was used to, and it provided her with a different perspective regarding other authority types. Manager 3 stated she learned that an executive should let employees do the work for which they are hired, and spend more time providing leadership instead of micro-managing. The magnitude of her move was not apparent at the time, but later she realized that she had made a monumental change and perhaps it should have seemed more intimidating at the time. Her ability to take things one day at a time helped tremendously and prevented any personal doubts from hindering her managerial functions.

Manager 3 was eventually promoted to an executive position at the MMAC where she remained for a couple of years before being chosen for the top executive position. She had the opportunity to work several months with the former executive in that position

before he retired. This opportunity gave her time to adjust to the new position and provided a smoother transition into her new role.

Manager 4. During the first nine years of her career, Manager 4 worked in procurement and learned two valuable skills: interpreting regulations and negotiating skills. Learning how to make decisions that were affected by legal implications demanded an understanding of how the process worked. Her initial time in this organization provided valuable knowledge and proved beneficial throughout her career.

Manager 4 later worked in Logistics for 7 years where she gained a greater understanding concerning the functions of the Center and the objectives of other coordinating organizations. Her work introduced her to a greater variety of operations and allowed her to be more flexible, a perfect environment for her personality. Manager 4 experienced personal contact with her customer base and learned how to listen and interpret the responses they provided. This opportunity helped develop the ability to understand and meet the needs of customers.

Throughout her experience as a manager, she learned how to facilitate meetings with greater efficiency. She watched other successful leaders and utilized their successful methods for dealing with people. Manager 4 believes that an individual should also contemplate the skills he or she does not want to practice as a manager. Many times people overlook this element, but it is just as important to grasp.

How employees are motivated is important for managers to understand. Manager 4 stated that she learned that there is not a standard method that works best for everyone.

It is important to know how each individual is energized in order to provide them with the appropriate leadership.

At the GS-15 level, Manager 4 learned how to operate within the political system that existed at the Center and determined that the key was to never compromise her personal value system. She understood how the process worked and was able to “survive” in the environment.

Manager 5. After leaving the military, Manager 5 was employed by the FAA in airway facilities at a lower grade level than males in the same position. During that time, gender issues were more prevalent and created some difficulty with grade level progression. When she initiated her career path, the government was trying to promote women and minorities into higher positions within the Agency. Manager 5 applied for an instructor position in a developmental program in electronics. This required her family to move from Seattle, Washington, to Oklahoma City.

After her son was born, she left the Center and worked from 1979-1983 as an instructor in electronics at Oklahoma City Community College. During her years in teaching, she learned the importance in valuing people. Manager 5 also stated that she learned how to counsel students, especially individuals who had difficulty with the program. She believed it was important to be open and honest with people in a way that does not devalue them. The teaching skills gained during this time were incorporated and have aided in her present management role.

When Manager 5 returned to government, she worked in logistics as a program manager. This experience was unique because the career path was different from her

previous course in airway facilities. She was recognized by a supervisor for skills and ability to manage programs. Manager 5 was recruited for her present position because she was a female engineer, but her managerial and technical skills qualified her for the job.

Throughout her career, she learned the importance of being able to laugh at herself because taking things too seriously or personally does not help. She learned how to “not be the boss.” She cited an example of former friends who were hired into management positions and changed their images. They tried to fit the image of the all-powerful, all-knowing boss. Manager 5 stated that she tried to emulate the kind of manager with whom she would enjoy working.

Manager 6. The majority of Manager 6’s career has been in government.

Although she worked for a little while as a secretary at the University of Pennsylvania, she moved to the state of Oklahoma and worked in Norman before being hired at the MMAC.

As a clerk typist, Manager 6 began her federal career in the organization for aviation education and training and was soon promoted to the GS-4 level. Eventually, she transferred to the personnel office, but left to obtain a promotion in the Logistics depot where she worked for only a few months.

Manager 6 bid and was hired for a developmental position in the personnel training department and has since remained. She worked in Training for several years, but moved into Classification as a GS-13. When Classification and the Employment department combined, she served as the team leader over both functions.

During this time, Manager 6 initially provided her services as a volunteer leader, and eventually served on the Board of Directors for the local Girl Scout Council where

she acted in a leadership capacity. She believes the organization had a beneficial training program that helped her learn the various functions associated with leading people.

Manager 6 stated that her career benefitted from the exposure she had with several admirable supervisors who encouraged her to succeed in life. One in particular was very excited that she had progressed upward in grade, even though it meant she would no longer be his employee. His memory is still relevant because she believes he truly wanted the best for her and did not stand in the way of her career.

Manager 7. In the early 1960s, Manager 7 began her career in the field of aviation at the Tinker Air Force Base and worked for over nine years in various clerical positions. A friend and neighbor who was employed at the MMAC suggested she submit her application and transfer employment. Having heard positive comments regarding the Center, Manager 7 chose to follow the advice because she wanted to work at a place that was not as large as the military base where she previously worked. There she felt she was only a number, one out of 25,000 employees. At the Aeronautical Center, she believed she would become more visible.

Early in her career, Manager 7 was hired in a developmental position (GS-7-9-11) in the employee development division and soon began devising a career path that would help prepare her for her primary career goal in management. In order to achieve this goal, Manager 7 knew she needed to gain experience and knowledge regarding the operations of the Center. It became imperative that she understood not only the functions of her position, but also how other divisions within her organization operated. She actively

sought to prove herself by volunteering to work on various projects that she knew would help gain exposure.

Manager 7's first management experience was gained in the Labor Relations department. During this time, she had become the second of only two female managers to oversee this particular organization. Traditionally, occupations in this field had been classified according to gender and considered to be roles that only a man could handle. However, Manager 7 chose to accept this challenge and sought to prove that she had the talent and skills needed to perform the functions of the position and would exceed everyone's expectations.

Experience gained during her career in aviation taught Manager 7 that it was extremely important to remain flexible, especially in a time when change was a consistent factor in government. Being rigid and unmovable only served to perpetuate problems. She believes that the ability to take a proactive approach, instead of a reactive, prevents a manager from having to play "catch up" and serves to maintain control over the direction of the organization. Although it takes a lot of planning and visioning to stay on track, managers must continually focus on "what is happening" at the Center and Headquarters in order to be effective.

Manager 8. Before working at the Agency, Manager 8 spent 10 years employed in various occupations. Her career actually began in a challenging technical position as an air traffic controller at the Albuquerque Air Route Traffic Control Center. This field was composed predominantly of men, but her competitive spirit helped her succeed in the environment. Being able to competently perform the functions of the occupation was



important because it dealt with safety. Her effective communication skills, both oral and written, led to the performance of certain staff functions which she found enjoyable.

She came to the Mike Monroney Aeronautical Center as an instructor in the organization for aviation education and training because she had always wanted to teach, but not in the traditional academic sense. Facilitating technical courses utilized two of her best qualities, technical aptitude and people skills. She learned how to become an effective instructor by watching others who were proficient in teaching technical subjects. Sometimes she would sit in their classes, just to learn the techniques they used to educate students.

Before she became a supervisor, Manager 8 was not sure she would enjoy the position, but she developed one-on-one relationships with her employees and was very happy with the job. She was asked by a superior to serve in an acting capacity as a second level supervisor, which later turned into a permanent position. Manager 8 learned to ask a lot of questions, but some skills were acquired by trial and error, and making mistakes along the way. She initially micro-managed, but discovered it was not the best way to deal with employees. Being too focused on the task directed her attention away from important people issues. Time and experience taught her valuable lessons regarding how to properly supervise and manage employees. They were skills she developed throughout her career.

In a technical culture, Manager 8 learned how to work in a male dominated environment and discovered that most people's gender issues are not conscious. As long as the person can perform the responsibilities of the job, there is not a problem. However

“how” the job is completed is a subjective concept and will be influenced by people’s cultural biases.

Manager 8 worked with people from various organizations at the Center when she managed a new screening process for air traffic controllers. During this time she learned to broaden her perspective and gained valuable experience regarding issues that dealt with personnel, budget and accounting, and security.

As a counselor, she learned about the operations performed by other organizations which enabled her to understand how different offices at the Center worked together.

Manager 9. This manager began her federal career at TAFB where she worked for 18 years in a procurement organization. Her first position was clerical, but she wanted to learn more and sought opportunities that would increase her level of experience. She took the Federal Service Executive Entrance exam (FSEE) and performed extremely well. Normally, an individual had to be a college graduate in order to take the test, but the office allowed a few internal employees to complete the exam.

Manager 9 transferred to the Aeronautical Center in 1989 and continued working in procurement as a contracting officer. After a couple of years, she was hired in a supervisory position which provided a valuable learning experience. She learned that supervising people was vastly different from managing. In her present management position, she has utilized her people skills to successfully lead her employees.

Manager 10. Manager 10 worked for 30 years in federal service; all but 3 ½ were spent in the department of procurement. Her first position in government started downtown for the Department of Defense (DOD). She did not care for the military

environment because it was too strict. In time she worked as a contracting officer at the MMAC which taught her how to deal with the public. She learned how to effectively negotiate with others, a necessary skill when working in procurement. Her next career step moved Manager 10 to the aviation education and training organization as an instructor for Logistics. People skills were continuously developed in this position, but she had some difficulty understanding the language of foreign students. She discovered that their accents intrigued her, but distracted her focus.

Manager 10 returned to the field of procurement in a familiar position and remained as a contracting officer for several years. The opportunity to work in a staff position provided her with more knowledge and experience than all the previous desk jobs. She learned about budgeting, training, and how to interface with other organizations.

After she transferred to an aviation information services organization, Manager 10 realized she was not prepared for the role. Her prior experience dealt predominately with contracts and other legal issues, not administrative systems or multi-media. During her 18 months as manager, she worked with people in occupations that were vastly different from those found in procurement, but she learned a great deal and found it enlightening. Here, she experienced firing her first employee.

In time she returned to her home in procurement and has remained there since. Manager 10 stated that this office felt more comfortable and her experience would be utilized more effectively within the organization.

Manager 11. Manager 11 initially started her career in a tenant organization as a secretary at the GS-2 level. She worked with technical engineers in the hangar, which provided an environment full of “sharp” people. They helped her understand how the federal process worked and provided information that helped her effectively bid on positions.

This manager said that she did not bid on every position because she was more concerned with working in jobs that were interesting and challenging. Her work experience was gained primarily in one organization, but is comprised of skills developed in computer operations, programming, and management.

Manager 12. Manager 12 has a varied background of work experience that initially began in a position at a hospital in New York. Transitioning from the hospital to the post office took five weeks and was a time when she worked both jobs. After ten years with the post office, Manager 12 was a New York City police officer until the city’s budget crisis ended that career.

Manager 12 stated that she took various examinations because they were challenging, fun, and provided choices when selecting a career. A goal she had established was to work in jobs that were interesting. Employment in these various occupations was the forerunner to her current position with the MMAC.

When she heard that a test was offered for positions with the Air Traffic Control (ATC) program at the FAA, Manager 12 filled out the paperwork for the examination. Out of 150 people, Manager 12 was the only person chosen for the position. Because of her age, training was restricted to the flight services area.

She reported to Huntington, West Virginia, where she lived for five years. At this location, Manager 12 faced racial discrimination when she tried to locate housing in the area where she worked. The situation involved physical and verbal abuse from a woman who was a landlord of rental property that Manager 12 viewed. When the authorities became involved in the situation, she stated that if it had not been for her high paying position with the federal government, the situation might have ended with more drastic consequences. During this time period, Manager 12 stated that another minority woman also had a similar incident involving housing discrimination. The community in the late 1970s had racial problems that involved the loss of several minority lives.

Manager 12 successfully competed for a position in New York when her mother became ill. There she faced racial discrimination in housing on Long Island. She prevailed in two discrimination court cases and was awarded monetary compensation. After staying there for three years, she submitted her application for a position with an aviation training organization at the MMAC. She worked in occupations that dealt with classroom instruction, administration, and supervision. In her opinion, before the reformation of the air traffic program, training courses were comprised of various individuals; certain groups, especially minorities, seemed to become isolated or were not a part of other students' study groups. The new program seems to better accommodate student training needs.

Manager 13. This manager began her career in civil service at Ft. Sill as a clerk/typist and was later promoted to a keypunch operator position. She classified her first boss as a "male chauvinist," but was fortunate that his eventual replacement was a supportive and encouraging individual who provided a positive influence on her life.

Manager 13 started her career in a tenant organization at the MMAC, as the only technical computer operator in the division. Her work involved interacting with doctors who specialized in fields of study such as psychology. This organization treated her with respect and she enjoyed the work performed.

In 1988, this manager transferred to an organization that performed highly technical functions and dealt with processes that were utilized to support other offices and programs that affected all FAA employees. Her career progressed substantially in this area, up to her current position as a senior level manager. She stated that the opportunity to bid for her present position came during a time when the government offered early retirement to employees. Since many individuals in management chose to leave the MMAC, several vacancies became available.

Manager 13 stated that her positive attitude and ability to “do the job” were just two of the reasons for her promotion into management. She stated that it is important to always work at a higher level than others expect. Always go above and beyond what is asked to be done.

Manager 14. This manager started as a secretary in an aviation training organization and quickly learned how to perform the functions required by the position. Her curiosity regarding the operations of the businesses led her to undertake additional work because she believed it would provide the opportunity to show her superiors the type of results she was capable of achieving.

Manager 14 worked for several years as a management analyst before being promoted into management. She worked hard and gained a breadth of experience before

submitting her application for her current position. Manager 14 chose to work in administration because she believed she could make a difference and would be able to fulfill her expectations of the job.

She primarily oversees a technical oriented group comprised of engineers and technicians. The exposure she gained from working in various positions throughout the organization provided opportunities to advance and increase her exposure to several technical areas

### Summary

Most of the members in this study began their careers in occupations that are categorized as clerical/administrative, and implies that the culture at the MMAC is conducive for women's career progression. Findings suggest that although most of these women did not define established career goals, their internal motivation and determination to prove their abilities provided the primary driving force for their success and progression into management.

### Research Question Three

*What Management Skills Evolved While Performing the Duties of a Woman in Aviation Management, and How Can Other Women Develop Their Talents to Become Qualified for a Position in Aviation Management at the MMAC?*

## Managerial Skills

Manager 1. Manager 1 emphasized that the ability to understand the political aspects of decisions is important to management. Choices made are not always business decisions; they encompass certain political factors. Managers need to have the ability to build coalitions and organize work in order to get things done. She stated that a manager sets the tone for the organization; it is the single most important thing for any manager to perform.

Manager 2. In order to be successful, Manager 2 believed individuals must develop a good technical base. She stated that a manager must understand not only the human elements, but the technical components as well. This combination would prepare an individual for making sound decisions. When managing a technical organization, individuals who do not possess this background lose the respect of their subordinates and are not able to provide effective leadership.

Project management skills are another element that should be developed. It is important to be able to budget, organize, and follow through from beginning to end. However, possessing such talents does not necessarily ensure that an individual will be a good manager. Manager 2 stated that people skills are the third factor that should be utilized in combination with the two competencies previously stated. Dealing with people encompassed a multitude of situations that often required the ability to manage conflict and other personal and professional issues.



Manager 3. According to Manager 3, OPM identified a list of competencies that she believed were “right on target.” In her opinion, it is important to be able to empower and bring energy to the various people issues that exist. As a manager, it takes certain skills to lead and collaborate with people to effectively coordinate work issues affecting the Center.

The changes that have occurred in government have forced managers to be more concerned with fiscal issues. Being aware and understanding how to manage resources is important for a manager, in combination with the building of customer relations. Managers must strive to become more generalist in nature because they now deal with more business related factors than was required in the past.

Effective Labor relations and union partnerships require specific skills in negotiating, communication and collaboration and are essential for executives. The whole gamut of management is demanding and requires extensive knowledge, but individuals who desire to be successful will strive to learn as much as possible in order to prevail.

Manager 4. According to Manager 4, individuals must first determine what type of career they want. Too many people develop a plan without fully understanding their likes and dislikes. She stated that a skills inventory would be beneficial because it would help identify areas that need enhancement.

Manager 5. The skills needed for a management position would depend upon the area. Not all occupations require a technical base. However, Manager 5 stated that areas such as Airway Facilities would require the development of a strong technical background in combination with leadership ability.

Managers without technical skills should trust their employees who do have the knowledge required to maintain the safety of the flying public. After all, the primary goal is to make sure planes do not fall from the sky. She believes that managers who do not exhibit this practice eventually fail. They do not empower employees to do their jobs. Manager 5 had an experience with a manager without a technical base, who made a decision that was politically correct, but not appropriate technically. He wanted to make all the decisions and did not incorporate the talents of his employees who possessed more knowledge.

Manager 6. According to Manager 6, it is important to develop a technical base, no matter the field of interest. However, she believes technical skills are secondary in a managerial position. At this level, people skills are primary because managers spend a lot of time dealing with issues concerning individuals. A manager needs to be able to make decisions and stand by them, even if people react negatively. Manager 6 stated that it is impossible to make everyone happy all of the time.

One of the most important things managers can do is let their people do the work. Manager 6 stated that her job was to provide employees with the resources they needed to get results. It is important to “stand back” and recognize the power of the employees.

Manager 7. An individual wanting to succeed must prepare, prepare, and prepare! It is extremely important for people to find out early what kind of work brings them joy. If they wait too long to decide on a career path, it will be more difficult to achieve the objective. However, by clearly understanding the future roles they wish to attain, they

could acquire the proper education and develop the skills that are necessary to successfully perform the functions of the position.

Manager 7 believes an individual can never be overeducated. Women who want to progress in their careers must choose to continually learn new things throughout their careers that will help improve or enhance skill levels.

Manager 8. Individuals who are thinking about a career in management should first gain staff experience. Manager 8 stated that it is important to experience this type of work because it requires different skills than the expertise utilized in technical work. Talking to an individual who is a current supervisor or manager will provide a valuable resource and information regarding the realities of the position.

In her opinion, it is important to find a person whom the individual trusts to identify her strengths and weaknesses. This is often difficult because people do not like to make nor hear negative comments. However, she believes it is critical for a person to know what attributes need to be developed for career advancement. Both parties must establish a comfortable and safe environment where an exchange can be made without either party feeling unsettled.

Manager 8 stated that it is important to be successful in carrying out the responsibilities of the position because people are always watching. Work hard to become an “expert in your field.” Be open-minded and learn not to take things personally.

Manager 9. Several important skills were identified by Manager 9. She believes skills such as the ability to listen and understand other points of view, interest in helping people grow, and consideration of other people’s feelings are just a few of the tools

necessary to be an effective manager. The ability to be flexible and compassionate is also useful.

Manager 10. Manager 10 identified several skills that managers must have in order to be successful. She believes that an understanding of the culture within the Headquarters, FAA, Aeronautical Center, and other regional locations is important. It is critical that an individual be aware of the operations that are performed not only in her organization, but in other locations as well. Gaining a broad perspective is critical because a person cannot manage if she does not comprehend how various offices coordinate.

Manager 10 does not believe that a manager has to be a pilot, an electronic technician, or have a background in flight standards in order to be successful. However, she believes a technical base provides the ability to understand the functions of an organization that is technological in nature. Otherwise, it would be difficult for a manager to communicate and cooperate effectively with employees who work in these realms.

Manager 11. Throughout her aviation career, Manager 11 learned important skills just by watching and working with managers who she believed were effective. She discovered that if she worked hard, all her efforts would “pay off,” and people would notice her talents. As a manager, she has established a strong work ethic and goes beyond what is expected.

Manager 11 recognizes that the geographic location where an individual works also appears to play a part in the work practices exhibited by employees. She stated that a group of people from the East Coast seem to have a different work ethic relating to the hours spent in the office. At 5 o'clock, they left to go home because, to them, that was

the end of the workday. At the Aeronautical Center, most managers stay until the work that needs to be completed is done.

When several members of the management staff left federal service due to the government's offer for early retirement, Manager 11 was in a position to serve as an acting manager for the position in which she currently serves. She did not initially seek this opportunity, but was influenced to ask for the assignment. In her mind, Manager 11 assumed that her superior already knew her qualifications and would offer the position if it was appropriate. She stated that it was uncomfortable to ask for the job. Manager 11 concluded that when an individual is in an acting position, she should treat the position as if it were her own, not just a temporary assignment.

Manager 12. In her management position, Manager 12 understands that it is important to provide employees with open and honest feedback. She stated that information needs to be communicated in a manner that represents reality. In the past, Manager 12 spoke with a woman who sought her career advice when she did not receive an anticipated promotion. Manager 12 believed that this individual wanted her to "fix" things and was not truly interested in finding out what could be done to increase her potential for promotion. She commented that some women believe promotions should be automatic, as long as they are doing a good job. Manager 12 stated that they forget it takes hard work in order to progress.

Manager 13. Manager 13's comments regarding managerial skills seem to be generic in nature. For example, she stated that work performance is a highly valued skill for a manager, and she always did her best to achieve results. Another useful skill is the

ability to deal with political issues that are prevalent in senior level management. Manager 13 stated that individuals must learn how to deal with the frustrations that are involved in politics because the higher someone progresses in the organization, the more difficult it becomes. She stated that to work in management, an individual must want to work with people because that is the primary responsibility of a manager.

### Summary

Findings suggest that at the senior management level, personnel skills were utilized more than technical knowledge, but the functions of the organization determined this factor. Members seemed to indicate that their primary role as a manager was to provide resources and leadership to their employees.

Members repetitively spoke regarding the importance of developing a broad understanding of how the various organizations at the MMAC functioned.

### Development Activities

Manager 2. Manager 2 stated that women should develop an Individual Development Plan to help identify likes, dislikes, and a direction in which her career can progress. Developing creativity and enhancing people skills are tools that need to be effectively combined with a technical background.

Manager 3. It is important that an individual develop her own career plan, according to Manager 3. Understanding both strengths and weaknesses provides valuable information regarding specific areas that may need some work. She believes that working

in different areas, with other teams, or on special projects would help build a multitude of skills.

Manager 3 also stated that activities such as Toastmasters or volunteerism provide exposure to other people and allow individuals to give something back to the community. She firmly believes that a well-rounded individual who continues to engage in life-long learning will become better prepared for her career progression.

Manager 4. Manager 4 stated that employees should first seek information that increases their understanding of how the organizations at the Center coordinate with one another. Individuals can complete an Individual Development Plan which is a useful tool for conducting a personal skills inventory. This activity identifies areas that need improvement and pinpoints individual strengths.

Manager 6. According to Manager 6, employees must make things happen. It is important to take action because no one will do the work for them. She stated that a well-rounded person makes the best employee. This manager believes that a college education is very important in combination with volunteering for community activities.

Manager 6 stated that another developmental activity such as participation on work groups provides greater exposure to people and other functions that occur at the Center. Education in areas of procurement, budget, and personnel are also important at the managerial level and should not be readily traded for a singular technical focus.

Manager 7. Activities that help develop skills necessary for management require a great deal of time and investment from the individual. Projects outside the realm of the

Center are just as important as those performed on the job. Manager 7 also stated that it is important to provide volunteer service to agencies in the local area because they often provide the opportunity to gain leadership experience in a multitude of areas.

Within the Center, be the first to volunteer for special projects that provide skill development and exposure to people and other organizational functions. Develop a reputation for getting results. She believes it is very important not to wait for opportunities, make them happen!

Manager 8. Individual Development Plans are a helpful activity for those who are interested in career progression. According to Manager 8, too many people want someone else to do the work for them. Taking the time to understand the skills necessary for a promotion also requires research and can be acquired by talking to others who will be candid.

It is important to develop a knowledge base that incorporates a broader understanding of aviation. This can be obtained by reading aviation related material such as magazines or other publications that focus on this business. Ground school training can be completed at a low cost and will provide an understanding of the responsibilities of a pilot. Manager 8 also talked about the Center library and the volume of aviation related material that is available. People should take advantage of this resource and of the librarian who works there.

She believes it is important for employees to let their supervisors know their career plans. They can provide advice that will be beneficial and might schedule time for employees to work on activities related to advancing their careers.



Manager 9. If an individual is unsure regarding which career path to follow, it is best to seek opportunities in business or human relations. Manager 9 believes that experience from either area would provide a background that is applicable for numerous directions.

Activities that will help an individual develop are as simple as managing a personal financial portfolio because it develops budgeting skills. Although written communication skills are important, she believes oral communications are a greater necessity. People need to be able to talk to one another, especially someone in a management position. Conducting a self-assessment is very helpful in analyzing strengths, weaknesses, and areas of interest. Manager 9 clearly stated that education is the key.

Manager 10. According to this manager, an IDP is helpful, but should be broadened to incorporate other important factors. She stated that shadow assignments and work details are beneficial because they help broaden an individual's knowledge. If possible, try to find someone who is willing to serve as a sponsor for work assignments and aim to learn from their expertise. Manager 10 stated that employees should focus on things they like to do. Do not waste time developing skills that are not enjoyable. Tests are available that examine people's likes and dislikes in order to determine their proper career occupation.

Manager 11. In order to progress into aviation management at the MMAC, Manager 11 stated that an individual should look at the successes of other women and try to understand how they achieved their positions. Development activities that increase communication skills and breadth of knowledge regarding how her own organization fits

into the broad picture will become increasingly important. She believes that by becoming more visible, employees would gain exposure to other people, organizational functions, and management from various areas. Manager 11 encourages employees to become involved in activities that involve cross-organizational efforts to increase visibility and experience.

Employees should seek the opportunity to conduct briefings and increase their chances of working with people who have conflicting opinions. In these types of situations, they will learn how to coordinate with opposing viewpoints. Manager 11 stated that maintaining a “can do” attitude is always a positive skill to practice.

Manager 12. This manager stated that in some organizations there is no clear path to follow in order to advance upward into management, but in the aviation training organization, the course is more specific. As a student in aviation training, once an individual has satisfactorily demonstrated the learning objectives and time-in-grade requirements have been met, she is eligible for the next identified step until reaching full performance level for that facility. When an employee reaches that plateau, the likely progression would be competition for a supervisory or management position or a transfer out to another facility or organization. Manager 12 stated that if an individual is in a dead end job, she should take control and research to find where she would like to work, and the steps necessary to make it happen.

She provided several developmental activities that may prove helpful to women wanting to work in management. In her opinion, individuals should first recognize available opportunities and work hard to accomplish results. She said it is important to

become knowledgeable about the various functions that are performed by the organizations at the Center. Shadow and detail assignments were identified as helpful activities to increase knowledge and experience. Manager 12 stated that it is important to work hard to make things happen.

Manager 13. In order to progress into management, Manager 13 offered advice regarding several activities that might be helpful. She stated that it was important for individuals to become visible because it is helpful for others, especially superiors, to know who they are, but especially their names. By volunteering to work on team projects, employees will be noticed for their interest and gain exposure to other people and organizations.

To advance in a technical organization, Manager 13 said that developing writing and public speaking skills are necessary because at the management level, these tools are constantly being utilized. She believes that technical people have a tendency to be deficient in report writing and need to develop this skill in order to advance into managerial positions.

Manager 14. Manager 14 stated that the type of activities that might help an individual prepare for a role in management will depend upon the level of management and the organization in which she chooses to work. For a first line supervisor position in a technical area, individuals must develop a good technical base that is required to perform the work completed in a particular area. She stated that employees could also develop the following knowledge: business practices, analytical skills, communication skills, and a strong financial background. Manager 14 identified that managers are starting to focus

their attention on becoming better leaders and are applying this information in the everyday business of the organization.

A further activity mentioned by Manager 14 was shadow assignments because she believes that it is a wonderful opportunity to work in an organization to verify if it is a place where an individual might like to work. It allows a person to “test the waters” to see if she enjoys the environment before transferring to a new position.

### Summary

Several members indicated that the identification of personal strengths and weaknesses is important before making career decisions. The developmental activities that received the most comments were: shadow assignments, individual development plans, and special projects. Findings indicated that it is important for employees to take control of their own career direction and perform the activities that would develop their promotional potential.

### Mentor Relationship

Manager 1. Although Manager 1 did not have an official sponsor, she was influenced by several men who provided career counsel. She has never developed a formal mentor relationship with fellow employees, but does actively counsel women who seek career advice.

Manager 2. Throughout her career, Manager 2 developed a plan that enabled her to achieve desired career goals. She analyzed the proficiency required to advance upward

in her organization and actively worked to gain the education and technical background needed to meet position requirements. Although she did not establish a formal mentor relationship with any particular individual, Manager 2 did visit with key executive leaders who were utilized as valuable resources. They identified skills which they felt were necessary for an individual to develop in order to be an effective leader.

Once a month a brown-bag session is offered to her employees who have questions regarding their career paths. Manager 2 counsels employees to try to decide on the type of work they like to do. The individuals who attend these sessions are predominantly women.

Manager 3. During her career, Manager 3 had several mentors, although not designated as formal mentors, who provided helpful advice and contributed positive support. Although at times there were not any specific female role models for this manager while she was moving up in the organization, she found that it is essential to find other sources who could assist in the advancement of her career.

Manager 3 acted in a formal and informal capacity as a mentor for several individuals who asked for her support. She stated that mentoring was more than just complimenting someone; it involved building a relationship with another person. Being honest and open in the relationship was key because people need to know the strengths they possess and the skills that need to be developed.

Manager 3 mentored an equal number of women and men and provided the opportunity for many to work shadow assignments with her. She stated that the learning works both ways because both parties in a mentoring relationship gain from the experience.

Manager 4. Manager 4 had an informal mentor relationship with a female from another organization who provided support and encouragement. The mentor respected her abilities and shared with others regarding Manager 4's skills.

Both women and men visit with Manager 4 regarding the skills necessary to become promotable, but the majority of employees are female. She communicates the importance of an individual development plan and discusses activities that would help accomplish career objectives.

Manager 5. Although she has not had an official mentor, she is presently looking for a person that can provide information and guidance to help her progress into the next phase in life. When she leaves the Center, she plans to be very active and hopes to share her personal and professional experiences with others.

She currently acts as a formal mentor in one-on-one relationships with several people. Manager 5 works with these individuals by sharing knowledge from a manager's standpoint.

Manager 6. Manager 6 did not have a formal mentor, but early in her career she received valuable advice from many superiors, who were mostly men. During this time, few women occupied high level managerial positions. Therefore, support was usually furnished by men.

Manager 7. Manager 7 did not have a formal mentor relationship during her career. However, she did observe the actions of women and men who exhibited the qualities of successful managers. Manager 7 learned a great deal by observing how these

individuals handled business and personnel conflicts. She learned skills that were necessary for effectively leading people and chose to utilize these tools in her own organization.

Manager 7 has been an informal mentor to women and men throughout her career in aviation management. She encouraged employees to attain their career goals and counseled those who sought her advice. In her opinion, employees should first decide on what they want to do with their lives, then establish a path that will lead them to successfully accomplish their professional goals.

Manager 8. Manager 8 received advice from people she admired and watched the actions of successful leaders, but did not have any formal mentors.

A few years ago, the Federal Women's Program at the Center sought to establish a formal mentoring program, and some GS-15 women organized mentoring circles for the Center. They recruited other GS-15 women and men to serve as temporary leaders of the circles, but the concept was for all circle members to serve in both a mentor and mentoree role. Manager 8 found the experience to be beneficial. She met new people, learned about other fields of expertise, and developed a network of support for advice and information.

She also participates as a mentor in a formal mentoring program sponsored by the Department of Transportation through the Internet. Manager 8 has mentored another woman 2,000 miles away, through telephone conversations.

Manager 9. Although she has not developed a formal mentoring relationship, Manager 9 observed the actions of other successful men and women who were managers at the Center. Through observations she has learned positive and negative methods for leading employees.

The relationships developed with employees were partially maintained by the walk-arounds she conducts in her office. Manager 9 personally visits each employee during this time. Initially, they were distrustful because it seemed management was watching the work being completed, but in time they became more comfortable with this practice.

She provided more counsel for women than men. For some reason, women in her office talk more about career progression than men. Manager 9 did not understand why, but believed men did not focus on establishing a career path because they already assumed they would advance in the organization.

Manager 10. This manager did not have a formal mentoring relationship with another person. She developed an Individual Development Plan during this time (it was a requirement) and discussed it with an executive. Nothing further developed from the relationship.

Manager 10 was part of a mentoring circle at the Aeronautical Center, but discovered that many of the participants were looking for a mentor who would “do something for them.” Although the original intent was positive, it ended up being a disappointment. They desired to progress in their careers, but did not want to take the necessary time to develop the skills needed for each job.



Manager 10 continues to mentor the employees who work in the organization. She assists everyone who is interested in working to advance his or her careers.

Manager 11. Although Manager 11 did not establish a formal mentor relationship with another individual, she did develop informal relationships with people whom she respected and valued. They provided advice and encouraged her to learn by providing the opportunity to try new work experiences. She received encouragement and positive feedback that helped increase her confidence level. If problems arose, they offered help and did not berate her for making mistakes.

Manager 12. This manager had an informal mentor relationship with several individuals in senior and executive level positions. She stated that the relationship involved the development of a network between people who provided helpful information and offer suggestions.

Manager 13. Although Manager 13 was not involved in a formal mentor program, she did observe the actions of others, whom she considered to be excellent managers. She observed how they handled situations and would note the factors that she found important. Whenever she needed help, Manager 13 sought their advice.

Manager 14. Manager 14 had informal mentor relationships with men because, at the time, few women occupied senior levels in management. In her opinion, the women who initially succeeded did not seem willing to help other females with their career progression. She was one of the early developers and supporters of the formal mentor program at the MMAC and believes the opportunity to share her knowledge and

experience with employees who want to be successful in their careers has been a rewarding experience.

Manager 14 stated that some employees enter the mentor program without fully understanding how the process works, and the responsibility of each party involved in the relationship.

### Summary

Every member in this study had some form of informal relationship with a mentor. Most observed the behavior and practices of individuals who they believed exhibited exceptional management and leadership qualities. The comments indicated that advice, support, encouragement, feedback, and counseling services were the primary benefits received from this type of association.

### Research Question Four

*What Major Problems Did Women Face as Their Careers Progressed into Positions of Aviation Management at the MMAC?*

#### Gender Related Barriers

Manager 1. Manager 1's main obstacle was a supervisor who had trouble viewing a woman in a management position. The difficulty he had working with a female in an authoritative role was readily apparent and created conflict between them. However, she soon discovered that more could be accomplished if she sometimes acted submissive. Manager 1 did not compromise her values. She merely learned how to work effectively

with an individual who maintained a prejudice against her gender. This experience taught her a great deal concerning how to handle a biased person.

Manager 1 also emphasized that when discipline was required toward a female employee, her peers often viewed it as two women who could not get along. On the positive side she emphasized that more women were working in technical fields and making progress in all areas. She observed that there were more women in higher grades than ever before.

Manager 2. The only obstacle Manager 2 recalled was exposure to managers who were controlling and obstinate in their relations with other people. She stated that ex-military individuals had a tendency to be very rigid in their management styles. They desired things “their way” and did not want their authority questioned.

In her organization, Manager 2 had been subject to managers, in superior and subordinate positions, who exhibited such behavior. She chose to accept their challenge and has tried to alter their practices by working with them. She wanted to demonstrate that success cannot be achieved in a controlling environment.

Manager 3. In the past, the Agency hired women in the field of aviation, a traditionally male dominated business. Manager 3 stated that some women who were employed during this period encountered skepticism regarding their qualifications because their gender was believed to be the only justification for their employment. Manager 3 entered government during this time and experienced some difficulty, but she did not dwell on their comments or let them hinder her career goals.

As a manager, she stated that it is important for individuals to believe in themselves and what they have to offer. It is also critical to not take things personally. Although some people may question your education or skill levels, it is important not to become a victim of their jealousy or desire to see you fail. Manager 3 believes that women should follow their goals and not focus on the negatives.

Manager 4. In an earlier position, Manager 4 believed that a stereotypical societal view exhibited by a superior would hinder her career progression. She decided to lateral to a different organization because she believed her opportunities for promotion would increase. Her decision turned out to be a wise one because she was exposed to a work environment that helped broaden her knowledge of the Center. It enabled her to increase and acquire a broader skill base which benefitted her immensely as a manager.

Although she never felt that, as a woman, she could not progress within the Agency, she had difficulty being taken seriously by men who did not see her as a professional. During a training course, Manager 4 sought the advice of a facilitator who provided candid information regarding her physical stature and attire. He told her that because most men “could see over her head,” they had difficulty identifying with her as a manager. Secondly, Manager 4 discovered that dressing the part of someone in a leadership position also lends credibility and respect. She stated that you can still be feminine, but you must also look professional.

Manager 5. The primary obstacle mentioned by Manager 5 focused on people and the derogatory comments they made to influence the opinions of others. For example, she mentioned a person who commented to others regarding her work breaks. The comments

made were directed toward her ability to get work completed if she was not at her desk.

Individuals who did not personally know Manager 5 might be influenced by his words and form a negative image. She stated that negative expressions such as this only serve to cause damage.

Overall, it is important not to seek out negativity because it does not benefit anyone involved. Manager 5 commented that this form of an “invisible” enemy only wastes energy. Instead she chose to focus on more constructive practices and refused to participate in gossip.

Manager 6. This manager did not experience any obstacles that affected her career progression. However, over 20 years ago, she did experience some difficulty with trying to convince men to listen to her advice regarding personnel issues. She stated that they would call her male counterpart in order to gather the information. In her opinion, it was a generation issue that does not presently exist in her environment. She considered it to be an irritation rather than an obstacle.

Manager 7. Manager 7 did not recall any obstacles during her career except for one example. While preparing for a presentation before the CMT, Manager 7 received a sexist comment from a male superior regarding her physical appearance. She was told that it did not matter what she said before the group (at the time all CMT members were male) because they would be more interested in how cute she looked. To prepare for her speech would be futile because anything she said would be ignored.

Manager 7 remembered feeling disappointed that a superior would dismiss her based solely upon her physical appearance. It was a discriminating comment that devalued

the importance and pride she felt in having the responsibility to provide information to high-ranking managers at the Center.

Manager 8. Manager 8 did not face any substantial obstacles during her career progression, but she had experienced some restrictions when she worked in a particular appointment. She cited an example when she isolated herself from her peers because she did not identify with some of the employees. The experience taught her it was important to maintain a communication channel with peers at all times. Otherwise, a person can become disconnected and ultimately hinder the effectiveness of the entire group.

Manager 9. According to Manager 9, people will face obstacles wherever they work, but individuals who are able to deal with conflict and have the courage to set their own feelings aside will be more effective in their positions than those who do not try to work cooperatively.

Manager 10. In Manager 10's career she has been fortunate not to have faced any major obstacles. She believes the promotions she received were based upon her qualifications and ability to carry out the responsibilities of the position. In her opinion, obstacles exist only if people let them.

Manager 11. This manager commented that during her career, the government was trying to increase the number of females in managerial occupations, which opened doors for many of the women currently in aviation management. Although this emphasis increased her opportunities, she earned every position because of her qualifications and ability to perform the functions of the job.

During her career, Manager 11 did not witness any blatant discrimination practices exhibited by men or women. She stated that the elevated competition may have increased negative comments from her peers, but nothing had ever been directed at her personally. She did conclude that women generally took care of any negative words, but did not file formal grievances. In her opinion, some men in management do not or will not address discrimination issues because it is not important to them.

Manager 12. During a basic instructor course, Manager 12 had an experience with a group that was directly related to the issue of race and possibly gender. The class was comprised of 12 people, one minority male and female, three white females, and seven white males. When it came time for promotion, other individuals from the initial class of 12 received their advancement before her or transferred to another location. Part of the recommendation process before a promotion was received, required that a letter of recommendation be written. A former white male classmate, not the supervisor, wrote a letter for another classmate, a white female and Manager 12. The two letters were written in opposing tones and confirmed her belief that she was not looked upon in the same favorable light as other people. Manager 12 stated that although this happened, she did not file any formal complaint. Later on, she competed with this particular male supervisor for a promotion and was selected. She stated that he was not happy and acrimoniously voiced his views about her and the decision made to select Manager 12.

Manager 13. According to Manager 13, the cultural environment of military offices seem to be more hostile toward working women than the culture that exists at the MMAC. She stated that although she did not file a formal grievance when a male

colleague made a sexual advancement towards her, she handled the situation with a slap across his face. She believed that her action reflected her disapproval and went about her day. She does not believe that such blatant examples happen today, at least not in her area.

Manager 13 did mention that some women who have “made it” into higher levels of management were not very supportive to their peers. In her opinion, they may feel that since they had to work hard to accomplish their goals, other women had to do the same.

Manager 14. Manager 14 was the first nontechnical woman to work in management in her current organization. She believes her lack of technical skills caused a problem with employees because they were conditioned to their manager making all technical decisions, but Manager 14 brought a totally different management philosophy which they found difficult to understand. She wanted the employees to make the technical decisions involved in their work. Her job was to make sure they had the resources to perform the work and lead the organization in accomplishing its goals and the mission of the MMAC.

For some time, Manager 14 believes employees tested her to see if she would carry out the practices that she promoted. She stated that because of her gender and comments made regarding her abilities, it was necessary to prove herself in order to counteract the negative remarks made concerning her professional credentials.



## Summary

The findings seem to suggest that discrimination factors associated with gender are not a prevalent factor in the culture at the MMAC. However, a few members who manage technical organizations contend that sexual harassment, negative remarks, and other factors still exist, although not to the extent that had been practiced in the past.

Most of the members handle these situations by specifically addressing the individual or working around the problem. There was no indication that any had filed a formal grievance.

### Reactions Toward Women in Management

Manager 1. Manager 1 described one man who was very demanding and had little patience with women, especially those in management positions. Although his actions were very frustrating and made her job very difficult. Manager 1 stated that she had to earn her position in management, primarily due to her gender.

Manager 2. Manager 2 stated that some men have trouble with her in a management position because they believe she advanced too quickly in the organization and had not paid her “dues.” The belief that seniority should determine promotions was still sustained by some. She stated that surpassing peers may have created some jealousy, but it did not affect her personally.

Manager 3. As the first female in her current position, Manager 3 believes people are still adjusting to her new role. In her opinion, the personality of the employee has

more to do with their reaction than her gender. To some extent, she believes that some generations may have more difficulty with a woman in a leadership position, but she does not let such negativity hinder the responsibilities of her job.

Manager 4. Manager 4 had not dealt with any adverse reactions from either men or women, but she learned that providing direction to men was vastly different. She stated that the wording of the request is unique and different from the language used to speak to women. For example, men seemed to require specific direction when given project assignments, and so forth. Manager 4 was not sure why her male employees required a different management approach, but she learned that by tackling the situation from a perspective acceptable to them, she was able to successfully achieve desired results. Time has taught her that men and women operate differently, but she does not suggest that one is better than the other. It is important to be flexible when working with people.

Manager 5. With fewer management positions available, the level of competitiveness has risen. According to Manager 5, she witnessed men and women who were uncooperative in helping others “climb the ladder of success,” but there are people who do care about their employees and will provide assistance. In her present position, she has been fortunate to have hired many of the people who currently work in her office. She believes it has prevented any adverse reactions regarding her gender from the employees.

When she received her GS-15 position there were some men who reacted negatively, but she countered their remarks by telling them that she was not responsible for her promotion; someone else hired her.

Manager 6. Manager 6 stated that gender did not make a difference at the Center, but believes it did in more technical fields such as air traffic control or other areas in the field. She stated that her belief was based upon the fact that men predominated in these positions and might have difficulty adjusting to women in their work area.

Manager 7. Because she had already established credibility within the organization, Manager 7 did not notice any blatant disregard for her position in management as a female. Throughout her career, Manager 7 had worked to build trusting relationships with others, based upon openness and honesty. If either gender felt uncomfortable working for or with a woman, Manager 7 did not experience discomfort.

When competing for managerial positions, Manager 7 noted that women, as well as men, were very ambitious and sometimes exhibited jealousy. The older generation of women who had worked for a number of years at the Center believed “dues must be paid” before anyone received a promotion, especially into management positions.

Since government agencies downsized considerably over the past years, the number of available supervisory and managerial positions has dramatically decreased. This has created a more competitive environment among those wanting to advance their careers within the Center and the Agency.

Manager 8. In the past, Manager 8 had experienced some negative reactions from men who held the “old school” mentality that women did not belong in management. The only time it became a problem was a situation when a male subordinate used derogatory comments to demean her gender. Instead of reacting to his words, she spoke with him

personally and discussed his unacceptable behavior. Overall, most employees do not have any difficulty accepting her as their manager.

Manager 9. When selected for her current position, Manager 9 experienced some difficulty with a couple of employees who filed grievances regarding her selection. They had worked in the organization longer and experienced difficulty accepting her as a manager. The grievances were later dismissed.

Although some men find it difficult to work for a female manager, Manager 9 chose to ignore their resistance and performed the duties of her job without allowing the tension to undermine her authority.

Manager 10. When Manager 10 became the first female manager over the entire organization, she believed that some men might experience a little discomfort. Most had never worked for a woman before and were unsure regarding how she would handle the job. Throughout her time as manager, she always received full support from the employees and emphatically believed that a manager who exhibited his or her “true” self would be treated with respect.

Manager 11. This manager stated that she was fortunate to never have faced any adverse reactions due to her gender.

Manager 12. Throughout her division, Manager 12 experienced other issues regarding her role in management and believes that men seem to have the most difficulty because she no longer fits into their frame of reference. For example, Manager 12 stated that they seem to be amazed when she completes assignments because they express their

surprise that she has so much depth of knowledge. Most of the men who work in her organization are from a mind set generation that is not used to seeing women in aviation management positions, and some are younger than Manager 12.

Manager 13. This manager stated that the current environment at the MMAC seems to be very supportive of all employees and did not witness any prominent discrimination practices in her organization or any other. Although there are still some chauvinistic attitudes exhibited by some men at the Center, she did not have employees in her office that behaved in this manner. She stated that if such opinions did exist, they would not be tolerated in her office.

Manager 14. The current environment for women at the MMAC is still affected by negative practices and remarks made by other individuals. She stated that women and minorities who progress into managerial positions must learn to deal with and overcome such actions. She believes that women are treated differently, especially those who work in the lower grades by employees who are at higher levels. However, she stated this treatment depends upon the organization in which they work and may not occur as frequently in areas that are less technical in nature.

Manager 14 stated that although nothing had been directly said to her, some men have made derogatory comments to others to try to demean her authority. She stated that the majority of men working in her organization are older and come from a military backgrounds. Those who practice discrimination do not see their actions as harassment, or they do not care to alter their behavior. She believes that some managers who do not

actively seek to alter the practices of their employees might be participating in the action themselves.

Manager 14 concluded that although employees and management are more conscious regarding issues involving discrimination and have completed training programs that increase awareness, it is difficult to understand how such behavior can still be prevalent in this day and age.

### Summary

Findings from the study indicated that half of the members have not been adversely affected by a negative reaction from men or women concerning their role as a woman in aviation management. They did testify that although some remarks had been made, they were not related to gender. Members from the technical organizations expressed more comments regarding such negative practices from the male population in their organizations. Military backgrounds and the age of the individual were believed to be the primary reasons for pessimistic reactions to their gender.

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

The purpose of the study was to identify and describe the educational background, work experience, personal skills, individual goals, and problems faced by women in GS-15 and above management positions at the Mike Monroney Aeronautical Center (MMAC) possess which may have contributed to their career achievements in the field of aviation.

This examination was based on the assumption that findings gathered during personal interviews of women in senior management, when compared with the review of literature, would provide a rich source of data. The information would not be limited for studying the career progression of female managers in the Federal Aviation Administration (FAA), but may also serve to help define what is important for future study of women in aviation management in general.

Findings from this study could be helpful to women, the aviation community, the MMAC, and the Oklahoma State University Aviation and Space Program.

#### Summary of Findings

A summary of the findings for this study provided a synopsis of the information gathered from the participants who were included in the sample. Answers to questions are

identified under category headings which specifically addressed the broad research questions.

The 14 women interviewed were in senior management at the MMAC, an organization containing a unique composite of aviation functions representing and supporting almost every type of aviation organization. The following is a summary of the demographics attributed to the members in this study.

### Demographics

The 14 women in aviation management chosen for this study were employed in senior level management positions, at the GS-15 grade level and above. Members of this sample range in age and can be classified as 40 years and above; two of the individuals were of minority descent. The size of the organizations managed ranged approximately from 24 to 1,700 full-time employees.

The range of educational degrees obtained from this sample are: one associate, nine bachelor's, and four master's degrees. One individual is currently enrolled in the doctorate program and another is completing her bachelor's. A total of four members from the sample have some college hours, ranging from a minimum of two to three years of course work.

The senior level managers interviewed from the organizations at the MMAC are classified according to the following categories: four aviation and education training, three aviation information management, three human and resource management and administration, two procurement, one engineering, and one logistics and maintenance senior level managers.



The size of the organizations range from 24 to 1,700 full-time employees. The majority of the women have worked in government service from 25 to 34 years, and at the MMAC for 10 to 30 years.

The Myers-Briggs Personality Type was indicated by 12 of the 14 participants in the sample and was varied except for one specific type known as ENTJ. This type was identified by 4 of the 14 members. The definition for this classification is a person who is considered to be a natural leader. Occupations associated with this personality trait are: lawyers, managers, mortgage brokers, administrators, and scientists. ENTJ's need a high level of control because of their unique leadership abilities. According to the demographics table (Table I), the majority of these women have the letters E, T, and J in their type. Qualities associated with such letters indicate the following: the letter E represents a person that is extroverted, more social, gregarious, and usually has a breadth of knowledge; T is associated with persons who are logical and analytical in their decision-making processes and tends to think and rethink the solutions to problems; and a person who is very structured, organized, and in control is someone that has the letter J in her personality type.

According to the authors Kroeger and Thuesen (1988), the characteristics of these managers, as identified by their personality type, are common among managers. A woman classified as an ENTJ or who possesses the letters E, T, or J in her type is sometimes viewed to exhibit masculine traits, but is usually more accepted by men who occupy executive positions.

TABLE I

WOMEN IN AVIATION MANAGEMENT  
DEMOGRAPHIC CHARACTERISTICS

CATEGORY	Aviation Managers
EDUCATION	(Total 14)
2 - 3 yrs.	4
Associate	1
Bachelor	9
(Enrolled)	1
Master	4
Doctorate	0
(Enrolled)	1
TOTAL NUMBER OF DEGREES	14
AIRMEN CERTIFICATION	
Private Pilot License	2
MYERS-BRIGGS TYPE INDICATOR	
ENTJ	4
ENTP	2
ESTJ	2
ISTJ	1
INFJ	1
Unreported	2
ORGANIZATION	
Aviation Education & Training	4
Aviation Information Management	3
Human Resources & Administration	3
Procurement	2
Engineering	1
Logistics & Maintenance Support	1
Size of Organizations:	24 to 1,700 Full Time Employees
Number of Years at MMAC:	10 to 30 Years
Number of Years in Govt:	25 to 34 Years

A study that focused solely on personality type would be needed in order to analyze the numerous aspects associated with individual personalities and how they affect work relationships, career progression, and so forth.

Only two members in this study did not indicate their personality type.

### Research Question One

*What Areas of Individual Development Such as Formal Education, Family Background, and Personal Skills Are Most Common for Women Who Currently Occupy Positions in Aviation Management at the MMAC?*

#### Education

The participants for this study hold a total of 9 bachelor's and 4 master's degrees from various universities. One manager is presently enrolled in a bachelor's program and another is completing her doctorate degree. Four individuals did not complete a formal degree, but have at least 2-3 years of college education. Several have contemplated returning to school to pursue graduate course work, but have not made a final decision regarding the time to begin.

Six of the 14 women specifically stated the importance of acquiring a college degree, especially for those interested in career progression or positions in management. The remaining eight managers expressed the value of continued education and believed it increased promotion potential. One manager believed having a graduate degree provided a competitive edge when competing for higher grade positions. Two managers stated that specific educational requirements had been enforced that required employees to obtain a

bachelor's degree in a business related field. Their organization required that to be eligible for a management position, an individual must have a master's degree or at least 24 hours of graduate work.

Four of the women have advanced into management without holding a bachelor's degree. Two managers stated that their progression proved more difficult without the formal certificate.

The degree major(s) for many of the participants were specifically related to their career fields or supported the duties affiliated with their managerial positions. The educational program areas were primarily chosen because of personal taste and course topics. Two managers specifically chose their majors because the degrees would increase the opportunity for promotion and were more widely accepted by the people who worked in their organizations.

### Family Background

All but one manager mentioned the influence their families provided during the early stages of childhood and into their teenage years. The effect the families had upon these women was both positive and negative. Six managers stated that the primary influence in life was their mother, who served as role model, provided supportive comments, and never placed restrictions or discouraged them from achieving life goals. Two managers identified their mothers as excellent role models who exemplified qualities they also wanted to develop. Two participants stated that their fathers were the primary influence. One specifically addressed the interest her father took in all of his children, and encouraged them to continue their education because he knew the value of a college

degree. Six stated that both parents provided a positive influence and created an environment filled with support and encouragement. The summary of their comments indicated that their parents provided attention that helped to inspire their development and unfold the courage to try whatever caught their interest.

Grandmothers were identified by three members in the study as positive influences. One manager commented that her grandmother served as a role model because she worked in positions that were traditionally occupied by men and showed that women could perform whatever job they wanted. Another stated that her grandmother was a teacher and an extremely bright, strong, and supportive person.

One manager stated that her father held a pilot's license and encouraged her to do the same. Although she did not follow in his path, her exposure to aviation at an early age may have had something to do with her present career. Another participant's mother and father both held private pilot's licenses. Her mother's was acquired in her 30s, while raising two children.

Six provided comments regarding their own family and the impact it had upon their career. Four specifically stated that the adolescent stage of their children was the most stressful time period in their careers. Three individuals commented that they initially tried to handle all the responsibilities associated with home, family, and career, but found it exhausting. It caused them to reevaluate their lives and reorganize their priorities.

### Personal Skills

Many similarities existed among the comments provided by the members in this study. The findings indicated qualities associated with the functions of their position or the skills utilized to relate to superiors, peers, or employees.

Traits repetitively identified by the majority of participants are as follows: honesty, ability to listen, analytic ability, tactfulness, truthfulness, development of a respected reputation, work ethic, and a genuine liking for people. The quality that was repeated most often was a genuine interest in people. Five out of 14 explicitly addressed this feature, believing it was an important skill for a manager to have because the occupation involved working with and managing people.

Other characteristics mentioned by the participants are communication skills, creativity, willingness to learn, curiosity, fairness, intelligence, ability to not take things personally, supportiveness of others, positive outlook, aptitude for dealing with change, capacity to motivate people, concern for the organization, and talent to develop new work methods.

### Research Question Two

*What Work Experiences Aided in the Preparation of Women to Progress*

*Toward a Position in Management at the MMAC?*

### Work Experience

The predominant pattern that emerged from the information indicated that 11 of the 14 managers started their federal careers in entry level clerical/administrative positions. Four started outside the MMAC at military bases before transferring to the Center. Because they were hired into a technical field, three managers started in grades a few levels higher.

All 14 participants had work experience in areas outside their present locations. Organizations involving aviation education and training, logistics and maintenance support, and human resources were the three prominent areas where these managers gained training. Five had been in the aviation education and training organization as clerks, instructors, air traffic control specialist, and flight services specialist; four were employed in the area dealing with human resource functions such as labor relations, staffing, compensation, training, and classification specialists and managers. Four had worked in an area for logistics and maintenance support as a clerk, instructor, management analyst, program manager, and technical troubleshooter. The pattern of employment for these managers seemed to provide an explanation for the breadth of experience all 14 possessed.

Only one manager mentioned goal setting when she talked about her career progression. Three participants indicated that once their careers began in federal service, they did establish career paths to follow. The other managers did not specifically address this point.

### Research Question Three

*What Management Skills Evolved While Performing the Duties of a Woman in Aviation Management, and How Can Other Women Develop Their Talents to Become Qualified for a Position in Aviation Management at the MMAC?*

#### Managerial Skills

Participants agreed that the type of technical skills necessary for management development were dependent upon the functions of the organization where they worked. Two managers expressed the importance of developing a solid technical base before concentrating on people related issues, especially in organizations that deal with air traffic, safety, and so forth. They expressed the opinion that employees would find it difficult to follow the directions of a manager without such knowledge. One manager stated that a first level supervisor in a technical field must possess basic technical skills before progressing into management. Another manager agreed with their comments, but expressly stated that technical dexterity, at higher managerial levels, was secondary to people skills. The primary role of a manager was to lead people. She believed managers should leave the completion of technical functions to the employees.

The overall skill that an individual must develop is the ability to have a broad understanding regarding the functions of her own organization, the MMAC, the FAA, and the DOT. The majority of the women mentioned this element and several repeated this



factor throughout their interviews. This suggested the importance of accomplishing this task.

Three managers believed that employees who have a strong “work ethic” would be successful in a management position. Their statements suggested that individuals who work hard will be noticed by superiors. One also stated that women must learn to ask for what they want. They should learn to ask for promotions and not assume that they will be chosen by their superiors because of the work they have accomplished.

As mentioned by the participants, the following characteristics should be developed in order to be a successful and effective manager: ability to trust others, present realistic information, maintain an open mind, honesty, integrity, ability to listen to others, flexibility, compassion, organizational skills, an understanding of office politics, and exposure to staff work.

### Development Activities

Two managers stated the importance of first identifying personal strengths and weaknesses before an individual initiates any developmental activity. There are tests available that can be completed on the computer that will help determine career occupations that are of interest. Three managers believe that volunteering for community activities is a wonderful chance to give something back to the community; it provides exposure to people outside work and expands skill levels. One manager stated that employees do not volunteer enough for such activities and should consider the value gained from the experience.

Two managers stated that the type of activity performed is dependent upon the organization in which employees work. For example, individuals in technical areas will more likely be involved in activities that require a greater technical competence.

Developmental practices that help enhance an individual's communication, visibility, exposure to other people and organizations, and an understanding of the MMAC, FAA, and DOT are imperative to the full development of future managers. Specific activities identified by the women in this study are: Toastmasters, reading aviation related material, ground school training, shadow assignments, special projects, creation of an Individual Development Plan, and work details. They believed that employees must work hard and take control of their own destination.

### Mentor Relationship

Although all 14 women were involved in a mentor relationship, mostly in an informal capacity, only one manager had a formal relationship with another individual. Five specifically stated that they found it very helpful to watch the practices of other men and women who occupied various levels in management because by observing their people skills and decision making abilities, the women believed they would learn more realistic ways to be effective. One manager commented that, in the past, it was more difficult to find a woman mentor because few were available. She stated that those who had managed to progress into senior levels in management did not seem to be willing to offer support or advice.

All but one manager discussed the counseling services which they personally provide to employees. Most of these women were supportive in helping individuals

achieve their career goals by being available to discuss issues or concerns that employees might have regarding their promotion potential. Five managers referred to an activity that they practiced in their organization in order to involve employees in the mentor process. Two conducted periodic “walk-arounds” where they visited each employee to talk about their concerns involving personal or professional matters. One maintained an “open door” policy to allow employees the opportunity to talk about personal or professional concerns at any time. Another provided employees with the opportunity to work on shadow assignments with her so that they could learn additional skills to help qualify for a promotion. One woman held brown bag sessions once a month to provide a time for her employees to discuss career paths.

Although these managers counseled both genders, most provided advice to women. However, opinions were varied in support of this fact. The explanations provided were: women seemed to be more concerned regarding the direction of their careers; because of their communicative nature, women tend to discuss such issues more than men; and men seemed to already know the direction they want their career to follow and do not seek outside assistance.

A word of caution was issued by one manager who had been involved as a mentor for women. She expressed concern that the younger generation does not seem to understand the mentor relationship because they seem to want someone else to do the work required to advance their careers. They do not understand that the responsibility to succeed is on their shoulders. Another manager supported this comment by stating that some employees in a mentor program do not seem to fully understand the concept or responsibilities of a mentoree.

## Research Question Four

*What Major Problems Did Women Face as Their Careers Progressed into Positions of Aviation Management at the MMAC?*

### Gender Related Barriers

Two participants did not experience any gender related barriers or negative comments in reference to their position as a female manager. The remaining individuals did cite at least one negative experience that was related to gender, but affirmed that their careers were not hindered because of the episode.

The examples mentioned dealt with several situations, but were similar in some capacity. Two managers spoke in regard to the examination some women received concerning their physical appearance. Hair color, dress, and beauty were factors that were used to evaluate them at work, but they learned to deal with the issue and did not let it negatively impact their job performance. One manager made reference that her peers initially saw her disciplining another woman as a situation reflecting two women who could not get along, but in time their reaction changed. The present culture in which she works no longer holds this view.

Three stated that military organizations and ex-military personnel are the two primary sources for gender discrimination. In their opinion, the organizational culture and rules governing military locations have been slow to comply with the legal requirements of equal employment. Since technical positions are usually occupied by ex-military

personnel, women who work in these areas submit a larger number of harassment complaints.

According to one manager, women who work in entry level positions such as clerical/administrative are treated with less respect than women who have impressive job titles and are located in higher levels within the MMAC. A definite class structure seems to be defined by an individual's grade level. Another manager commented that her peers expressed their surprise when she completed a work assignment because they seemed to have doubted her competence. She did not understand why they hired her if they mistrusted her abilities.

#### Employee Reactions Toward Women In Management

Six of the participants interviewed stated that neither men nor women reacted negatively towards them because they were women in management positions. Although they experienced some difficulties in their jobs, they were not related to gender. However, one manager stated that because of her gender and lack of technical skills, employees tested her to verify if they could trust her management philosophy and practices. In time, many learned to trust in her.

In summary, the comments encountered were believed to be due to the following reasons: (1) government downsizing dramatically increased the level of competition, generating some jealousy; (2) generation issues associated with older men in the workforce; (3) employee discomfort experienced by men who had never worked for a woman manager; and (4) practices exhibited by ex-military men.

Comments received from the participants always ended on a positive note, even when this issue was discussed. The comment repeated most often by these managers was to “never focus on the negatives.” These women agreed that it was important to never focus on the negative remarks made by others because no one would win.

## Conclusions

The following conclusions were drawn, based upon the answers provided by women in management at the Mike Monroney Aeronautical Center. The findings for this qualitative study specifically addressed the four broad research questions.

### Conclusions Regarding Individual Development Factors

Education was regarded highly by the managers in this study. This fact was obvious because all but four people had at least a bachelor’s degree; one of them was currently enrolled in a college program to obtain her degree. Almost a third of the participants had acquired a graduate degree which suggests that education plays an important part in their lives. The women who did not possess formal degrees still valued education, but acquired their knowledge from training courses provided by the government and extensive reading of books related to their work and personal development.

Although the degrees varied, a Bachelor of Business Administration seemed to be the most common field of study, followed by technical majors such as physics and aviation and space. The managers who worked in a predominantly technical field, such as aviation

education and training, chose majors specific to that area to obtain the necessary skills for their positions and to utilize the degrees as tools for progression into management.

According to Bosco (1998), the FAA Administrator stated that future women in aviation must develop skills in areas such as statistics, mathematical modeling, and economic analysis. This suggests that women who currently work in or plan to enter the field of aviation should be more compelled to work towards completing a degree program that is closely connected with technical operations. It seems that a business degree is currently appropriate for most management positions at the MMAC. However, the future trends of aviation will create a greater need for individuals with math and science backgrounds.

In the book *Women's Career Development* by White, Cox, and Cooper (1992), the father was identified as the primary parental influence in the lives of successful women in management. However, according to the women in this study, although both parents provided a positive influence in most of their lives during childhood, more than half of the respondents commented that their mother served as the primary role model. This comparison would seem to suggest that parental influence provided by a mother or father is not a conclusive background factor of women in management.

Several of the managers had fathers who were not present while they were growing up, and this may explain why a greater number credited their mothers with having a larger impact during their early development. References made by several women suggested that their mothers were already strong individuals who exhibited independence and courage. With or without their fathers present, their mothers may still have been chosen as the more influential parent.

The personal skills mentioned by each of these women were similar in nature and seems to indicate a pattern of talents. Each manager focused on skills that were closely associated with human interactions. For example, communicating, listening, trusting, and other factors were listed as characteristics that these women believed they exhibited. Since their positions required a great deal of time managing people, they all agreed that having a genuine interest in their employees was the most important quality a manager could demonstrate. This final conclusion may serve to negatively impact those who believe that managers can be taught how to lead employees. It seems to have created serious doubt about the information provided by Cohen (1999) who believes managers can be developed if given the proper tools.

#### Conclusions Regarding Work Experiences

The majority of women in this study did not possess what most people would refer to as “traditional” technical skills. The work performed by the majority of these managers required a greater need for skills that helped to perform personnel and business related tasks. People skills proved to be of greater value and were utilized more often in the day-to-day management tasks in the organization. Their level in management at the Center necessitated the ability to lead their employees, and provide vision and resources to the workers who performed the tasks associated with the organizational occupations.

Edwards and Gregory (1998) wrote that the criteria that will be utilized to evaluate future managers for the FAA will be more personnel related leadership qualities. This would indicate that the women at the MMAC possess leadership qualities that are in agreement with executive development standards.



For individuals who desire to work in technical related areas such as aviation education and training, logistics and maintenance support, engineering, or other similar organizations, and want to be promoted into management, need to develop a “traditional” technical educational base that is applicable to the area in which they will work.

Employees who work in these areas tend to be promoted based upon their technical expertise and management skills. Managers who were in organizations that required a technical background indicated that a person must seek a technical degree or experience in order to compete for positions in such areas.

Career progression for women working at lower grade levels in clerical/administrative occupations is definitely possible because the culture at the MMAC seems to be supportive of women and has a proven history of promoting from within. The majority of the managers interviewed were promoted into higher level positions after starting at lower grades. However, a primary circumstance that may alter this possibility is the government downsizing that is presently eliminating many supervisory and management positions. Also the education levels of employees are rising because more people are returning to college to complete their bachelor’s degrees and many more are continuing to increase their learning through graduate course work. Women can no longer expect that “hard work” or time in service alone will be the primary evaluation criteria utilized in promotion selections. Those who still have several years before they retire and want to progress further in their career should consider returning to school for additional education. As the advancement into management becomes more difficult due to increased competition and fewer available positions, experience as well as education credentials will increase in value.

### Conclusions Regarding Managerial Skills

According to the majority of members in this study, the ability to have a broad knowledge base regarding the various entities which comprise the MMAC was imperative to an individual's success, especially in management positions. The women in management stated that even though each system performs different functions, they all must work together in order to accomplish the mission of the MMAC, to ensure the safety of the flying public.

According to Richardson, Rodwell, and Baty (1995), a breadth of work experience and a broad knowledge base regarding the operations of business was also identified in a study of women in general management. The women stated that it proved to be a critical practice that helped increase their competitiveness. Findings seemed to indicate that no matter what type of organization employees work for, individuals should increase their knowledge base and strive to learn all they can about the company in which they work.

People skills were again listed and by now must be considered a highly desirable talent for management personnel. Several activities were found that may enable individuals to prepare for their careers in aviation management. Employees must initially identify their strengths and weaknesses by taking the time to self-analyze internal characteristics. This process may help determine areas that require skill development.

Community work was an activity that was repeated by several managers and believed to be an opportunity that employees often bypass. Findings indicated by Swiss (1996) also discovered that individuals who participate in activities for nonprofit organizations broaden their experience base and are provided with challenges that may

help increase their personal and professional skill level and enhance their career potential. These activities help to provide visibility within and outside the company.

The research suggests that enjoyment of an activity intended to enhance career progression is also important. Otherwise, an individual may not complete assignments because they do not hold her attention and she will end up losing interest.

A relationship with a mentor in a formal or informal capacity could prove beneficial and is readily available to employees who are willing to accept responsibility for their own careers. A study conducted by authors Jacobs and Coffey (1992), indicated women who had mentor relationships received positive benefits from superiors who provided encouragement and support, which ultimately helped their careers.

Findings by Brooks and Brooks (1997) also support the mentor relationship between women and their superiors. The women who participated in their study believed that having a mentor was critical to their success. Since women have not had the same advantages as men, this relationship provided additional support and enhanced their visibility.

According to the women in this study, managers are available to provide assistance to those who seriously want to be promoted, but employees who are not accountable will not gain from this type of relationship. An individual must understand and accept the responsibilities that are attributed to the role.

## Conclusions Regarding Problems Faced By

### Women In Management

Gender issues and examples of discrimination practices seem to be more common at the MMAC among women who work in areas where positions are predominantly occupied by ex-military personnel and other men ages 45 to 60. Managers in positions that are comprised of one or all of these elements seem to receive more criticism regarding their ability to perform the job, their competence, and are tested by their employees who distrust their authority.

Women who manage in organizations that are more administrative in nature did not seem to experience the same amount or form of negative comments and reactions from their employees. Although the women at the MMAC did mention some negative reactions from male, and some female, counterparts, the reasons they provided suggested that the inappropriate behavior had more to do with personality differences than gender.

During the interviews most of the women who did provide an example of discrimination stated that they were more interested in getting their work accomplished than focusing on the negativity that is typically associated with such behavior. It seemed that through such adversity, these women had increased their strength in dealing with conflict issues and had actually received more benefit than detrimental consequences. The fact that these women did not focus on the unfairness of the situation seemed to indicate that they have the ability to not let minor annoyances hinder their management performance.

This conclusion from the women in mostly administrative management positions seems to contradict the literature relating to the statistical reports of harassment cases that have been filed by a large number of women during the past decade. The book *How Men Think* by Mendell (1996) provided several studies regarding the number of discrimination cases that are still being filed each year. She stated that white collar workers are just as likely to experience harassment as women who work in traditionally blue collar fields. Since most of the managers included in this study progressed in their careers during a time of social change, it would seem that more examples would have been provided. However, the actions that women undertake to deal with harassment are unique and must be understood before drawing any final conclusions.

According to Mendell, women tend to overlook or personally handle discrimination practices because of several factors connected to their early development, parental influences, societal influences, personality, and other variables. Society has encouraged women to blame themselves or remain silent regarding this issue. She found that some women do not speak because they feel they will not be believed, are not sure if the harassment was real or imagined, may be labeled a troublemaker, or they may be afraid of repercussions.

The reason for the unusual underreporting of situations involving discrimination cases may simply be that the majority of employees and the culture at the MMAC do not support such practices. The profile article in *Aviation for Women* (1998) of top executive women in aviation management provides support to their statements. The interviews conducted of five women who occupy regional administrative and center director positions indicated that the present culture of the FAA does not support discrimination

practices in the work force. However, further study would need to be completed before a final conclusion can be drawn.

## Recommendations

Based upon the data gathered for this study, the following recommendations are provided as related to the findings associated with each of the four broad research questions.

### Recommendations Pertaining to Individual

#### Development Factors

Women currently working in about to enter the workforce at the MMAC must obtain a bachelor's degree in order to be considered for a career in aviation management. Programs of study that focus on subjects involving math and science would be more beneficial (Bosco, 1998). As the number of individuals possessing formal degrees increases those who do not have formal education may not be competitive in the future job market. Although several women in this study did progress in their careers without a degree, many stated that career advancement was more difficult.

A system designed to analyze individual self-assessment needs should be completed by all employees in order to determine their strengths and weaknesses. Early determination of these factors may enable employees to seek employment in organizations that would utilize their abilities or develop skill areas that need improvement. The opportunity for personal development early in their careers might eliminate improper career decisions and open other doors that are more individually appropriate.

### Recommendations Pertaining to Work Experiences

Although the majority of the participants in this study did not develop any concrete guidelines to establish personal career goals, they eventually developed work objectives, once their career progression began. Therefore, it would seem that an individual who takes a proactive approach is better prepared to develop a career plan that indicates specific work experience that is needed in order to obtain primary occupational goals. The formulation of specific goals is directly related to individual identity and indicates the ability to achieve according to Kerr-McDougall (1999).

Based upon the importance of forming specific guidelines for advancement, the Aeronautical Center should establish a website that will allow employees to conduct their own research regarding the opportunities available to them at the MMAC. The system should provide several self-assessment tests that identify individual preferences, strengths, and weaknesses. It should furnish a list of individuals who are willing to share information with others regarding skills needed for advancement, developmental activities, and the realities of their occupation. However, it should be noted that completion of this activity lies solely with each individual. It is their responsibility to control the destiny of their careers.

### Recommendations Pertaining to Managerial Skills

In the interest of employee education, a course or written document should be developed by the organization responsible for employee training regarding the operations of the MMAC, FAA, and the DOT. Extensive knowledge of these offices was identified

as a key requirement for employees who want to work in aviation management at the MMAC. Such knowledge may help inform and produce employees that understand how their position contributes to operations performed by others at these identified locations.

Since mentoring is a key element in the development of women for positions in management (Brooks & Brooks, 1997), the MMAC should provide the necessary resources to establish and maintain a formal mentoring program for women, minorities, and all other employees. A list of men and women willing to serve as mentors in a formal capacity should be developed and made available to employees. It would be the responsibility of the employee to initiate the relationship and perform any activities suggested by the mentor. This type of alliance would provide exposure to superiors who possess “real world” experience, which may help increase the employee’s promotion potential.

Developmental activities outside the work environment may provide employees with additional opportunities to increase their skill base. Individuals should volunteer their services to organizations because this type of experience is known to strengthen people and leadership skills. With the increased competition for supervisory and managerial positions, activities performed in addition to normal work functions would enhance an individual’s credentials. According to the responses from the participants, volunteer assignments are highly regarded by those who occupy leadership/managerial positions.



## Recommendations Pertaining to Barriers Faced

### By Women in Management

Educational institutions still have a primary role in educating young women regarding the discrimination practices that still exist in today's culture and business environment. Grade schools, high schools, and colleges have a dramatic impact on women's self-development and should seek to eliminate traditional gender stereotypes that still guide the treatment and subjective practices of young men and women.

Although the number of women employed in the field of aviation is increasing, the industry still needs to expand the percentage of women who occupy high management positions throughout its organization. According to Swiss's (1996) critical mass theory, an increase in the number of women in traditional male environments will create a social change and aid in women's progression into upper management.

Although the senior level management team at the MMAC is approximately 40% women other management positions, especially in more technical areas, need to increase the number of women represented.

Changing or administering "correct" moral practices has never been successful. Therefore, the recommendation for this element is to conduct research in other areas of government and outside businesses to examine how they handle such situations. The best way to alleviate these negative practices would be to educate our young people.

As the number of women employed in aviation continues to rise, the number of discrimination factors associated with gender should decrease. However, differences will

always exist because individuals are comprised of various experiences, backgrounds, and personalities.

### Concluding Remarks

The managers chosen to participate in this study were selected because they represented a wide variety of organizations that comprise a unique regional component of the FAA. The cooperation and support provided by the Mike Monroney Aeronautical Center and women in senior level management positions was instrumental in conducting the research needed to address the research questions identified earlier in this dissertation.

The participants of this study were extremely helpful and provided a wealth of information that many will find useful as they work to advance their careers. It is encouraging to know that the managers at the Center are willing to help others achieve success in their professional goals.

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## APPENDIXES

**APPENDIX A**

**LETTER TO PARTICIPANTS**

Dear Ms. \_\_\_\_\_

I am currently working on my doctoral dissertation in the College of Applied Educational Studies, Aviation and Space Education, at Oklahoma State University. My research is focused on identifying the Characteristics of Women in Management at the Mike Monroney Aeronautical Center, in Oklahoma City, Oklahoma. You have been chosen to participate in this study because of your achievement in the field of aviation management. I will be interviewing several women in management from the Center and would appreciate the opportunity to interview you in person, at a time that is convenient. My intent is to conduct the interview during the month of \_\_\_\_\_.

The purpose of the study is to identify the educational background, work experience, obstacles faced, personal skills, and goals of selected women in aviation management at the Mike Monroney Aeronautical Center. Findings from the study could render a set of identifiable characteristics that would provide guidance to women who seek a career in aviation management.

Attached are samples of the questions that will be asked during the interview which will last approximately one hour. With your permission, the interview will be audiotaped to aid in analyzing the data. All tapes and transcripts will be confidential and identified only by code. All tapes will be destroyed once the dissertation is completed. A copy of the final report will be presented to you before being submitted to the graduate college.

I will contact you by phone on \_\_\_\_\_ to answer any questions you may have and obtain permission to conduct the interview. Until that time, please feel free to contact me regarding the project at the following number: (918)274-0478.

I appreciate your time and hope to meet with you regarding this research project.

Sincerely,

Brenda D. Salgado

**APPENDIX B**

**INSTRUMENT RESEARCH QUESTIONS**

**PERSONAL:**

1. Describe your educational background (formal or informal) and how you feel it impacted your career.
2. Describe your family and where you grew up. Were you influenced by anyone in particular? During this time, do you recall any experience(s) that helped to develop skills that you now utilize in your management position?
3. Identify some personal and professional characteristics that you feel are your best attributes.

**CAREER:**

4. Identify your previous work experiences and the skills you obtained during this time.
  1. What did you learn from your earlier positions and how did they help you prepare for your current position in management?
  2. Describe how you obtained your current position in aviation management?
  3. Why did you choose to work in the field of aviation? Why the MMAC?
  4. What skills do you feel are necessary in order to be successful as a manager in aviation at the MMAC?
  5. What obstacles, if any, have you experienced that may have affected your career at the MMAC?
  6. Describe the organization in which you work. What type of positions do women occupy?

7. How do men in your organization and in other areas of the MMAC relate to you as a manager?
8. During your career, have you ever developed a relationship with a mentor? If so, describe how you benefitted from the association.
9. Have you ever had the opportunity to become a mentor? Describe what that was like.
10. Describe the career opportunities that are available to women who currently work at the MMAC.
11. What advice would you give to women who wish to pursue a career in aviation management?
12. What developmental activities should women pursue in order to obtain a career in aviation management?
13. In your opinion, what are the most important characteristics that an individual must develop in order to be successful as a manager at the MMAC?

APPENDIX C

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM



OKLAHOMA STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD

Date: May 10, 1999 IRB #: ED-99-124

Proposal Title: "CHARACTERISTICS OF WOMEN IN MANAGEMENT AT THE MIKE  
MONRONEY AERONAUTICAL CENTER IN OKLAHOMA CITY,  
OKLAHOMA"

Principal Investigator(s): H.C. McClure  
Brenda Salgado

Reviewed and  
Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

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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

Brenda D. Salgado

Candidate for the Degree of

Doctor of Education

Thesis: CHARACTERISTICS OF WOMEN IN MANAGEMENT AT THE MIKE MONRONEY AERONAUTICAL CENTER IN OKLAHOMA CITY, OKLAHOMA

Major Field: Applied Educational Studies

Biographical:

Personal Data: Born in Oklahoma City, Oklahoma, November 15, 1965, the daughter of Mr. and Mrs. W. C. Cole, Jr.

Education: Graduated from Tuttle High School, Tuttle, Oklahoma, in May 1984; received Bachelor of Business Administration degree from the University of Oklahoma, May 1989; received Master of Adult Education from the University of Central Oklahoma, July, 1995; completed requirements for the Doctor of Education degree at Oklahoma State University in December, 1999.

Professional Experience: Adjunct Instructor, Oklahoma State University; Employee Development Specialist, Mike Monroney Aeronautical Center; Vehicle Control Specialist, Hertz Data Center; Instructor, AMK and Associates; Yeoman, Carnival Cruise Lines; Certified Covey Facilitator; Certified Facilitator.