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**AN EVALUATION OF HOW ORGANIZATIONAL CULTURE CAN
PERPETUATE A FORMAL MENTORING RELATIONSHIP**

THESIS

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AFIT/GEM/ENV/06M-15

**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY**

AIR FORCE INSTITUTE OF TECHNOLOGY

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AFIT/GEM/ENV/06M-15

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PERPETUATE A FORMAL MENTORING RELATIONSHIP**

THESIS

Presented to the Faculty

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In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Engineering Management

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Abstract

This research assesses how organizational culture can influence the effectiveness of formal mentoring. Specifically, leadership would like to determine what aspects of the Air Force culture, if any, are important to positively influencing formal mentoring. Their current methodology involves the web-based Mission Driven Mentoring program as a formal method of mentoring. Because of this, a problem may exist with how military members, as well as leaders, enforce concepts, such as mentoring, while constantly rotating positions. Organizational culture can help to instill a permanent practice of effective mentoring if leadership understands what is important to organizational members. Numerical results indicate that organizational culture may indeed influence formal mentoring. Further results are provided to show leadership what aspects of organizational culture may influence mentoring the most. This approach may be very promising for solving situations which involve the rapid rotation of personnel.

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Daniel J. Rieker

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AN EVALUATION OF HOW ORGANIZATIONAL CULTURE CAN PERPETUATE A FORMAL MENTORING RELATIONSHIP

CHAPTER 1

INTRODUCTION

Overview

Sacrifice, self-discipline, unity, and service-before-self are said to be fundamental to the military way of life, while liberty and individualism are typical values found in civilian organizations (Breslin, 2000). Both military and civilian organizations are unique; each embracing values important to their own organizations, which in turn creates distinct organizational cultures. Organizational culture can be defined as the identity, values, and behaviors within an organization; however, culture may be more complex than a simple definition (Detert, Schroeder, & Mauriel, 2000). Culture can be thought of as the personality of a business, sometimes even unnoticed; yet often the very thing that brings the workplace together (Van der Post, de Coning, & Smit, 1997). Culture may often bring a sense of belonging to an individual within an organization, further creating a desire for career longevity (Cameron & Quinn, 1999). Organizational culture can allow for fresh ideas to be channeled through the organization, and is suggested to influence how leaders interact and exchange information with followers (Van der Post, de Coning, & Smit, 1997).

Mentoring can be a way in which information and experiences can be exchanged between a leader and a subordinate (Kram, 1985). Individuals who have been mentored report higher promotion rates as well as an increase in career satisfaction (Dreher & Ash, 1990). Mentoring has also shown to have benefits in the military. Research suggests

junior United States Air Force (USAF) officers reported higher self-assurance (Singer, 1999) and job satisfaction (Lewandowsk, 1985) having been mentored verses the junior officers who have not been mentored. Further, Lewandowski (1985) also found that junior officers who were mentored indicated a higher level of self-confidence as their careers progressed than the officers who were not mentored.

Mentoring can be beneficial to the USAF for several reasons, such as in the form of career advancement (Kram, 1985). Research suggests that mentoring relationships have advanced careers and guided skill building through a profession (Noe, 1988). Knowledge of the organization can be obtained through mentoring by learning the inner-workings of an organization (Viator & Pasewark, 2005). Another benefit of mentoring is the possibility of increased exposure by giving a less experienced employee high visibility jobs and challenging an individual through harder assignments (Turban & Dougherty, 1994). Likewise, mentoring can bring a sense of belonging to the individuals within the organization (Ragins & Cotton, 1999). This could lead to a long-term investment of potential leaders in the USAF by giving of their time through mentoring.

Purpose of the Research

The purpose of the research is to assess the possible impact that organizational culture may have on formal mentoring relationships. Formal mentoring occurs when a less experienced employee is assigned to a senior person within an organization to share knowledge and experience (Eby & Lockwood, 2004). With the constant rotation of personnel in the military, mentoring should be valued within the culture to truly be effective (Cameron, 2004).

Leadership within the USAF agrees mentoring is important. In November 1996, the Air Force established Air Force Policy Directive 36-34, in which the Air Force developed guidelines and responsibilities for commanders and leadership alike in which to pass on their knowledge of a successful career to their subordinates (Gibson, 1998). More recently, General Gregory Martin, retired, former commanding officer of the USAF Material Command (AFMC), instituted the Mission-Driven Mentoring (MDM) process and tool. This tool enables all AFMC headquarter offices to promote formal mentoring to civilian and military members as instructed from high-level leadership. General Martin realized the benefits of mentoring and fully supports the MDM process and tool. General Martin also pointed out from AF Doctrine Document 1-1 that “leaders can only be created through an iterative process of development involving education, training, and expeditionary operations seasoned with experience and ongoing mentoring by more experienced leaders” (G.S. Martin, personal communication, March 29, 2005).

Leaders tend to focus on the culture and important ideals of an organization (Cameron & Quinn, 1999). If the leader fails to instill the importance of their ideals to their subordinates and mentoring is not viewed important within the culture, mentoring may fade away with the installation of a new leader, if this leader does not share the same views (Van der Post, de Coning, & Smit, 1997). These ideas should also be passed on to the successor so they may continue with the same importance as before.

Overall, the leadership within the Air Force considers mentoring to be an important tool for future leader development. Previous research also suggests that mentoring should become part of the organizational culture to become successfully implemented (Cameron, 2004). Since mentoring is considered important to the Air

Force and organizational culture can influence the effectiveness of mentoring, this research will further assess organizational culture and the impacts culture may have on mentoring within the Air Force specifically.

Propositions

This research will explore the relationship between culture and mentoring, as well as examine the proposition that organizational leadership may affect both culture and mentoring (Kram, 1985; Van der Post, de Coning, & Smit, 1997). As a hierarchal culture, the USAF primarily relies on procedures and processes that are formalized and structured (Cameron, 2004). Formal rules and policies are put in place to hold the organization together (Cameron & Quinn, 1999). In this type of culture, to be effective, leaders must be coordinated, efficient and organized to keep the organization running smoothly (Cameron, 2004). Leadership style is said to be a very important sub-component of organizational culture (Cameron & Quinn, 1999). Therefore, with the Air Force being lead in a formal manner, perhaps the most effective mentoring relationship may exist between the Air Forces' formal culture and formal mentoring.

Another way in which the USAF can better engrain mentoring into its culture is through the use of virtual communities. Virtual communities share information by using electronic media (Ridings, Gefen, and Arinze, 2002). Through the use of virtual communities, mentoring may be enhanced by using electronics with formal mentoring, as the electronic media allows for the leader to mentor, despite being absent from the organization . Therefore, a culture utilizing both virtual communities and formal mentoring may affect the mentoring effectiveness.

CHAPTER 2

LITERATURE REVIEW

Overview

Concepts involved with mentoring and organizational culture are discussed in the following review of literature. Literature related to mentoring will be introduced first, followed by a discussion of formal and informal mentoring and how these practices may be better utilized in certain organizations. The area of discussion involving mentoring will be developed in a manner that differentiates perspectives of mentoring, the types of mentoring, as well as what is considered to be effective mentoring. Next, the topic of virtual communities will be discussed in regards to the effects a virtual community may have on an organization and mentoring.

Organizational culture is the last discussion within this review. Within the literature review of organizational culture, many components of organizational culture will be discussed. One of these components, leadership, will be discussed as how leaders can impact mentoring as well as the culture of the Air Force (Cameron & Quinn, 1999). The discussion will also include organization integration, which determines how an organization learns and transfers its knowledge base (Van der Post, de Coning, & Smit, 1997). The review will conclude with an evaluation of how formal mentoring with virtual communities can influence a hierarchical Air Force culture. The review will also examine subcomponents of organizational culture such as the style of leadership and how it relates to mentoring. The review will then conclude with hypotheses offered for each section as they may relate to formal mentoring and organizational culture.

Perspectives of Mentoring

Mentoring began in ancient Greece. Around 1200, B.C. Odysseus was leaving for the siege of Troy when he appointed his friend to be a surrogate father to his son, Telemachus. From this early mentoring relationship, leadership skills, culture, and values were learned (Lankau, Riordan, & Thomas, 2005). Over the years, mentoring relationships have advanced careers and guided skill building through a profession or organization (Noe, 1988). In the definition suggested by Kram (1985), the mentor is the older adult that passes on experience and knowledge to the younger adult, or protégé (Kram, 1985). Mentors are suggested to support and guide protégés as work practices are accomplished. The research within this thesis will be concerned only with the protégés point-of-view regarding effective mentoring and organizational culture given the small number of respondents in the target population. The following section will specifically discuss perceptions of effective mentoring.

Perceptions of Effective Mentoring

Mentor, as defined by the American Heritage Dictionary (2005), is a wise and trusted counselor or teacher. Kram's (1985) foundational work argues that mentoring is more than the dictionary definition. Her definition of mentoring includes similar ideas that a mentor supports, guides, and counsels a protégé; while at the same time she suggests that the mentor can offer mentoring functions used in role development (Kram, 1985).

Mentoring functions occur within the mentoring relationship to enhance the growth of the individual as well as the progression in career advancement. In some of the earlier literature on mentoring by Levinson (1978), a number of roles are identified and

briefly defined such as teacher, sponsor, host and guide, exemplar and counselor. There are two functions offered by Kram (1985); career-related and psychosocial functions. Career functions will be explored first. An overview chart identifying career and psychosocial functions is depicted in Appendix A, Figure A1.

Insert Kram's Figure A1 about here

Within the career functions, a mentor can provide a protégé with knowledge by teaching him the inner-workings of an organization and prepare him for advancement. Kram (1985) introduced five specific functions within the career-related dimensions of mentoring. The first function involves sponsoring an individual and providing the opportunity to gain knowledge of a mentor's experience in the organization. The second function is coaching, which can teach an individual as well as provide him with feedback. Third is protection, which helps the protégé by providing support and acting as a buffer from potential threats. Finally, the last two functions provide exposure that helps advancement by giving a protégé high visibility jobs and challenging an individual through harder assignments (Kram, 1985). Exposure can also occur as the protégé is given assignments allowing him contact with other managers, as well as protecting from office beauracracy and keeping informed on what management is doing (Dreher & Ash, 1990). In simple terms, the protégé is learning "the ropes" of the organization (Fagenson, 1992).

Psychosocial functions can be viewed as the emotional growth of the protégé (Kram, 1985). These functions develop the protégé's sense of self-worth to include personal identity, self-confidence, and overall effectiveness as a professional (Kram,

1985). Role modeling is the first function in psychosocial mentoring. Role modeling is defined as the image in which a subordinate view their superiors through their attitudes, values, and behaviors and how they model themselves to become successful (Kram, 1985). The successful mentor is the role model that demonstrates appropriate behavior, shows the values of the organization and humanity, and helps develop attitudes that can make a protégé successful (Kram, 1985).

The second function in psychosocial mentoring is to create a sense of acceptance and confirmation to an individual. Through this function, individuals derive a sense of self from the positive reactions conveyed by the other member. As the protégé develops competence in the work world, the mentor's acceptance and confirmation provides support and encouragement to the protégé. Similarly, as the mentor strives to feel useful and creative in later career years when advancement and recognition are less frequent, a protégé's acceptance and confirmation provide support for the next generation of managers (Kram, 1985).

Counseling is the third function offered in psychosocial mentoring. Counseling allows an individual to explore personal concerns that may affect their contribution to the organization (Kram, 1985). Internal conflicts that put protégés at odds with themselves become the focus of discussion in the relationship. In this situation, an individual finds an outlet in which to relieve stress or fears one may ordinarily keep to himself, thus allowing the protégé to focus on his job (Kram, 1985). Through the use of feedback and sincerity, a protégé is able to cope with concerns without affecting performance. A mentor can also benefit from feedback. From these feedback sessions, the mentor may find self accomplishment from the support given to a protégé (Kram, 1985).

Friendship is the last function of psychosocial mentoring. This function shows a social interaction which results in a mutual liking and understanding of each other. Both individuals enjoy the friendship component since it enhances experiences at work. Each person finds in the relationship someone they can enjoy sharing personal experiences with, eating lunch with, or at times, someone to escape from pressures of work with (Kram, 1985). Friendship may be a difficult task to accomplish within the Air Force, as it may be viewed as a form of fraternization because of the rank structure the military uses. Perhaps a form of respect would better define this last psychosocial function within the military, instead of friendship.

Looking at the roles mentioned by Levinson (1978) and Kram (1985), some of these roles which are given different names actually mean the same thing (Woodd, 1997). For example, Levinson (1978) uses the term “counselor” to refer to supporting the protégé, whereas Kram (1985) refers to the psychosocial function “acceptance and confirmation” which is provided by offering support. Similarly, both Kram (1985) and Levinson (1978) mention the importance of being a role model to the protégé, a term which Levinson (1978) refers to specifically as “exemplar.” Finally, both researchers use the term “guide” to refer to a mentor. This overlap conceptually highlights the importance of specific roles for mentors and protégés, namely guidance, support, and role modeling. These areas were also the key focus of mentoring for Jacobi (1991).

Sarafino (1998) also mentions various types of social support that can be offered to a protégé. Emotional support involves the expression of empathy and concern toward a person. This type of support provides a sense of comfort to an individual, as well as a

sense of belonging (Sarafino, 1998). As stated, these functions seem to favor an effective mentoring session in general.

In an effort to assess mentoring effectiveness, Noe (1988) developed a 21-item mentoring function scale. The effective mentoring scale measured both career items (7) and psychosocial items (14). This instrument assessed teachers (protégés) and superintendents (mentors) to gain information to the perceptions of receiving benefits from the functions identified.

Scandura (1992) developed a 15-item instrument that was composed of three subscales. Similar to Noe's (1988) scale, Scandura's (1992) scale also measured career and psychosocial functions. In addition Scandura's (1992) scale also measures a separate function, role modeling. Role modeling is typically considered a sub-component of psychosocial functions (Kram, 1985). Scandura (1992) created the role modeling subscale to focus on whether a protégé had a desire to model his behavior after that of his organization (Nielson, Carlson, & Lankau, 2001).

Within these studies, the effectiveness of mentoring has been shown to be related to age, rank, organizational tenure (Ragins & Scandura, 1994), race (Thomas, 1990), and gender (Dreher & Cox, 1996). Ragins & Scandura (1994) suggest that organizational position could affect a mentoring relationship. The researchers suggest that higher ranking members in an organization had an advantage in creating a mentoring relationship, which ultimately led to a greater positive perception on mentoring sessions. This was a result of higher ranking members perceiving greater access to potential mentors than the lower ranking members. Dreher and Cox (1996) reported that a protégé's gender and ethnicity impacted development and perceived advantages within a

mentoring relationship. Dreher and Cox (1996) suggested that members of the same ethnicity and gender were more likely to develop a mentoring relationship. Additionally, Dreher and Cox found that protégés reported a relationship with a white male mentor was more advantageous than a female or minority mentor. In addition to the scales mentioned above, Tepper, Shaffer, and Tepper (1996) developed an instrument to measure the overall effectiveness of mentoring. This instrument is considered to be consistent throughout various studies and has been deemed a reliable scale (Duffey, Fox, & Oppenheimer, 2001; Plaza, Pharm, Draugalis, Skrepnek, & Slack, 2004).

Tepper, Shaffer, and Tepper's (1996) 16-item assessment was validated on 568 managerial employees. These items were conceptualized from Kram's (1985) psychosocial and career-related functions. Tepper, Schaffer, and Tepper (1996) specifically examined these four psychosocial functions: role modeling, acceptance, counseling, and friendship. Career functions included sponsorship, coaching, protection, challenging assignments, and visibility (Tepper, Shaffer, & Tepper, 1996). Tepper, Shaffer, and Tepper (1996) also found that the mentoring function items had similar results for men and women; thus, this instrument was appropriate for use and comparison of responses from both sexes. Finally, this instrument has also been used extensively in conjunction with formal and informal mentoring to assess mentoring effectiveness (Duffey, Fox, & Oppenheimer, 2001; Plaza, Pharm, Draugalis, Skrepnek, & Slack, 2004).

One area that may have an impact on effective mentoring and the organizational culture is the various types of mentoring. Formal and informal mentoring may or may not allow both career and psychosocial functions to occur (Eby & Lockwood, 2004). In

this next section, informal and formal mentoring will be discussed. The potential advantages or disadvantages formal or informal mentoring may bring to a mentoring relationship will also be assessed.

Types of Mentoring

The type of mentoring used at an organization may have an effect on the overall effectiveness of a mentoring culture. This section will discuss the benefits and disadvantages of formal mentoring and how it relates to organizational culture. To better understand the concepts within formal mentoring, informal mentoring will be briefly discussed first as a comparison to formal mentoring.

Informal Mentoring. Despite the Greek origin of the term “mentoring” as a formal concept, in the early evolution of mentoring, relationships were typically more a bond that developed over time between like individuals, as opposed to a formal relationship where members are brought together (Allen, Day & Lentz, 2005). Informal mentoring relationships tend to occur when two individuals seek each other out (Allen, Day & Lentz, 2005). The protégé or mentor may actively seek each other out to develop a relationship; or they might develop a relationship over time due to constant contact between individuals (Koberg, Boss, & Goodman, 1998).

Regardless of who initiates the relationship, mentoring relationships are suggested to take time to develop into a trusting relationship, as suggested with informal mentoring (Ragins & Cotton, 1999). Trust is a key component within mentoring (Allen, Day & Lentz, 2005). Without trust, a relationship may not fully develop (Kram, 1985). Trust in mentoring relationship is generally estimated to take an average of 6 months to 1 year for the relationship to become fully functional, if it becomes functional at all (Koberg, Boss,

& Goodman, 1998). Success in mentoring also depends on the likeness of individuals and similar goals (Allen, Day, & Lentz, 2005). Informal mentoring is suggested to contain these characteristics as like-people seem to seek each other out to develop a mentoring relationship.

In organizations where a long-term interest in developing subordinates is desired, informal mentoring may be the best choice. In other organizations, the rate at which personnel change occupations may influence the type of mentoring. Formal mentoring may be desired in these situations and will be discussed next.

Formal Mentoring. Formal mentoring is defined as an organization initiating a pairing between a mentor and a protégé (Eby & Lockwood, 2004). Formal mentoring schemes have become more common over the past few decades. It is suggested that over a third of the corporations in the U.S. have established formal mentoring programs (Nemanick Jr., 2000). This trend was also noted to be growing (Nemanick Jr., 2000). Formal mentoring is also suggested to meet career-related needs as well as psychosocial needs (Lankau, Riordan, & Thomas, 2005).

Formal mentoring begins with assigning a potential protégé with a senior person within an organization (Eby & Lockwood, 2004). This mentor may or may not have the same ideals and personal values as the individual being assigned. In essence, incongruent ideals may cause a problem within the new relationship (Eby & Lockwood, 2004).

To further investigate the idea of formal mentoring, Ragins and Cotton (1999) identified that formal mentoring relationships typically last less than one year, which may or may not provide enough time to allow a successful relationship to develop. Also, mentors may seek a relationship merely to appease upper management, not for the benefit

of the protégé (Ragins & Cotton, 1999). If this occurs, the mentor-protégé relationship may never develop into a fully trusting relationship as the mentor may not have the protégé's interests in a high regard (Noe, 1988). One key finding in the Ragins and Cotton (1999) study was that formal mentoring did not offer any substantial gain to a protégé over those who were not mentored at all. The sample ($n = 1,154$) used in this study included protégés who were engineers, social workers, and journalists (Ragins & Cotton, 1999). Protégés also reported less support in formal mentoring on four of the psychosocial functions. These functions include friendship, support, role modeling, and acceptance (Ragins & Cotton, 1999).

Formal mentoring is also found to be viewed as short-term, focused on career goals versus the long-term view of informal mentoring. A general finding within mentoring is that protégés report receiving greater career-related, as well as psychosocial mentoring in informal relationships versus formal relationships (Chao, Walz, & Gardner, 1992; Ragins & Cotton, 1999). However, one study showed no significant difference in mentoring outcomes for mentors between formal and informal relationships (Allen & Eby, 2003). Two studies in 2004 found that protégés in formal mentoring relationships were more likely to report dissatisfaction with their mentors in areas such as disinterest, self-absorption, neglect, interpersonal competence, as well as a lack of job skills (Eby, Butts, Lockwood, & Simon, 2004; Eby, Lockwood, & Butts, 2004).

Ragins and Cotton (1999) noted that formal mentoring relationships are unique since the mentor-protégé pair is initiated via a third party; thus, creating a situation where it may be difficult for them to develop a close relationship. The motivation of the paired mentors and protégés can also be drastically different between formal and informal

relationships (Eby & Lockwood, 2004). A mentor may be motivated by a desire for recognition within the organization, or simply because mentoring is a requirement (Ragins & Cotton, 1999); whereas, protégés may genuinely desire a developmental relationship (Eby & Lockwood, 2004). In an effort to explore formal mentoring relationships further, an empirical study by Allen and Eby (2004) suggested that training for both the mentor and the protégé, in areas such as role clarification or preparation, was of the utmost importance to ensure the effectiveness of the formal mentoring relationship. Many mentoring relationships are suggested to fail as a result of mentors and protégés not being prepared for their respective roles (Eby & Lockwood, 2004).

Protégés often have various reasons for taking part in formal mentoring programs. While one person may desire a relationship with a more senior worker, another may feel an obligation to take part for career development (Eby & Lockwood, 2004). While there are many individual reasons for someone to participate in formal mentoring, there are also advantages and disadvantages to participation in formal mentoring.

One formal mentoring study by Eby & Lockwood (2004) assessed a telecommunication and health-care organization who identified mentors and protégés that have been involved in a formal mentoring program. Protégés' responses from this study suggested that new learning was the most realized benefit to formal mentoring, exposing him or her to new techniques and ideas (Eby & Lockwood, 2004). Another benefit reported by the researchers was advice about short-term and long-term career plans. The protégés also noted that the networking opportunities were greater; they received better clarification of work roles, demonstrated improved job performance, and obtained a sense of pride (Eby & Lockwood, 2004).

Conversely, there were a few disadvantages noted as well. On a few occasions, the formal relationship was uncomfortable. Sometimes mismatches occurred such as different backgrounds or interests as well as incompatible personalities (Eby & Lockwood, 2004). Protégés also reported feeling disappointed by their mentor, the mentor not living up to the protégés expectations, a lack of commitment to the protégé, or poor availability (Eby & Lockwood, 2004).

Hunt (1994) suggested that there are three fundamental differences between formal and informal mentoring. First, formal mentoring focuses on satisfying organizational goals rather than goals for the mentor and the protégé. Second, formal mentoring allows for a mentor and a protégé to be automatically paired instead of a spontaneous selective process. Finally, there is a specified time frame for to meet organizational goals for formal mentoring.

Formal mentoring is suggested to expose new techniques and ideas to potential protégés (Eby & Lockwood, 2004). Researchers also reported that advice about short-term and long-term career plans were more beneficial from formal mentoring sessions. Formal mentoring sessions may also better clarify work roles which may lead to improved job performance and a sense of pride (Eby & Lockwood, 2004). The Mission-Driven Mentoring process and tool was also developed to promote formal mentoring to units within the Air Force Material Command (AFMC) (G.S. Martin, personal communication, March 29, 2005). This tool mandated that units within AFMC conduct formal mentoring sessions to all employees. Research suggests that white males have an advantage within formal mentoring sessions. Given that previous research assessed that a

protégé's gender and ethnicity impacted development and perceived advantages within a mentoring relationship (Dreher & Cox, 1996), hypotheses 1 and 2 are:

Hypothesis 1: Respondents will differ on perceptions of formal mentoring in terms of ethnicity such that majority respondents will have a greater positive perception on formal mentoring than minorities

Hypothesis 2: Male and Female respondents will differ on perceptions of formal mentoring such that males will have a greater positive perception on formal mentoring than females

Previous research from Ragins & Scandura (1994) suggests that organizational position could also affect a mentoring relationship. Higher ranking members in an organization were suggested to have an advantage in creating a mentoring relationship in that higher ranking members perceiving greater access to potential mentors than the lower ranking members. Given these previous findings, research hypothesis 3 is:

Hypothesis 3: Respondents will differ on perceptions of formal mentoring such that respondents with higher organizational position will have greater positive perception on formal mentoring than respondents with lower organizational position

Virtual Communities. To this point, the discussion has been based on the assumption that mentors and protégés interact face-to-face. However, with the introduction of new communication technology (e.g. electronic mail), other types of mentoring have become prevalent. A recently accepted type of mentoring is called electronic mentoring and is conducted through virtual communities. Virtual communities have become accessible only in the last 5 to 10 years with the onset of electronic mail and the internet (Ridings, Gefen, & Arinze, 2002). Only recently has electronic mentoring been utilized in the work place and used to mentor a protégé (Ridings, Gefen, & Arinze, 2002). These virtual communities have since allowed mentors or protégés to give or

receive information, without physical distances as a barrier, thus enhancing mentoring (Ridings, Gefen, & Arinze, 2002).

In the formal arena, protégés are paired at the onset of employment with a mentor. Formalized e-mentoring programs can also be used to pair individuals with those outside a particular organization. Formal e-mentoring enhances a protégé's ability through quickly establishing what the new employee needs to accomplish to become successful within that organization. Some benefits may include clarity of job requirements, where to obtain information for successful implementation of ideas, and lessons learned from both parties within a mentoring relationship.

Ridings, Gefen, and Arinze (2002) conducted a study that included organizations that used virtual communities. Respondents in this study were supervisors and subordinate employees. The study explored effects of virtual communities, such as e-mentoring, and the trust developed in these environments. The study also assessed how people confide personal information using electronic means. Ridings, Gefen, and Arinze (2002) ultimately determined how individuals desired to give and receive information through the use of electronics. The survey they developed was conceptualized from Sudweeks and Simoff (1999) model of virtual community type members. The respondents used electronic means to distribute personal and professional information to peers and superiors. The survey was web-based to help in validating electronic communication. It also enabled the researchers to reach multiple organizations as well as leaders and members alike. They hypothesized that perceptions of members' responsiveness would positively affect trust in ability, benevolence, and integrity. Thus, this responsiveness would determine whether information could be openly shared using

electronics. Their results indicated that information could be shared given an environment where electronic communication was encouraged. Electronic communications in mentoring sessions could still allow the protégé to assess the organization's culture, ideals, values, and career progression through electronic means (Muller, 1997).

Virtual communities are suggested to have a positive influence through quickly establishing what the new employee needs to accomplish and what is necessary to become successful within an organization (Ridings, Gefen, & Arinze, 2002). Benefits from virtual communities may include clarity of job requirements, where to obtain information for successful implementation of ideas, and lessons learned from both parties within a mentoring relationship. Since virtual communities allow protégés to access mentors away from the mentor's immediate location, virtual communities may have a positive influence on mentoring in that the mentoring session can continue regardless of where the mentor or protégé may be. In accordance with previous findings, research hypothesis 4 is:

Hypothesis 4: There will be a positive relationship between virtual communities and mentoring

Hypothesis 4A: There will be a positive relationship between virtual communities and career-related mentoring

Hypothesis 4B: There will be a positive relationship between virtual communities and psychosocial mentoring

Organizational Culture

Organizational Culture was not formally introduced into organizational theory until 1979 (Detert, Schroeder, & Mauriel, 2000) and has since become part of comprehensive and integrative studies (Breslin, 2000). Since that time, many ideas or

definitions have been developed in regards to the notion of organizational culture. One definition states that organizational culture focuses mainly on values or behaviors within an organization (Detert, Schroeder, & Mauriel, 2000). Deal and Kennedy (1982) defined culture as the way things are accomplished in an organization. Rousseau (1990) suggested that organizational culture is the way people should behave and the things that are highly valued within an organization.

Organizational culture can be defined as the personality of the organization (Rousseau, 1990). For the purpose of this research, the definition of organizational culture is the values and normal operation of an organization as well as the intended end result of the organization (Rousseau, 1990).

Schein (1984) suggests that the intended end result is the most important level of organizational culture. Culture is a term that is difficult to express distinctly. One can tell the culture of an organization even by looking at the arrangement of furniture, such as are the desks grouped together or is each person put in their own cubicle, or if they place a mission statement on the wall. An organization's culture can also be expressed by whether members hold themselves, their co-workers and the company in high regard.

Organizational culture can also be looked at in a systematic view. Inputs in this system include feedback from society, professions, and values on competition or service (Cameron & Ettington, 1988). Outputs in the system may be the behaviors and appearance of the organization. The concept of culture is particularly important when attempting to manage organization-wide change. The idea of culture is one of the reasons that many strategic planners now place as much emphasis on identifying strategic values as they do mission and vision. The Air Force stresses both the mission statement

and the vision to its personnel, thus finding these concepts to be important (Korten, 2004).

There are different types of culture just like there are different types of personality. Cameron (2004) identified four different types of culture. The first culture identified is the clan culture. This type of culture is typically a friendly place to work. Leaders are often thought of as mentors and friends. The organization is developed through the values of loyalty and tradition. This culture also emphasizes long-term benefits of individual development, such as the ideas shared with informal mentoring (Cameron & Quinn, 1999). The organization, as a whole, places teamwork, participation, and consensus in high regard.

The second type of culture is identified as adhocracy (Cameron, 2004). Here the culture is dynamic and creative. People within these organizations often take risks. Effective leadership in these circumstances is often the visionary type and a risk-taker. The driving force within this type of culture thrives off of experimentation and innovation. This organization is constantly ready for change and looking for ways to get ahead of the competition.

The third type of culture is the market culture. This type of culture is basically results oriented. The leaders within this type of culture are usually considered directors. The organization puts its values and goals toward winning which usually make these cultures tough and demanding.

The last type of culture identified by Cameron (2004) is the hierarchy culture. This typically is a formalized and structured organization. Procedures and processes are defined and direct personnel in the direction they should go. Leaders within these

organizations are efficient and good organizers. This organization thrives on stability rather than chaos.

The USAF is suggested to be a hierarchical culture (Korten, 2004). Here, the organization is made up of a rank structure that is well formalized. Many processes and procedures are identified through Air Force Instructions to help determine which direction individuals should go. The Air Force also offers many manuals in which personnel should follow to conduct their jobs successfully. To better understand the culture of the Air Force and to test which culture the Air Force actually has, an instrument should be used to assess the overall culture. Two instruments are widely accepted in the organizational culture area of study. The first instrument, and most widely used is the organizational culture inventory (OCI). A second instrument was developed to simplify the OCI; however, it uses similar concepts to investigate attributes of an organization. This second instrument is called the organizational culture assessment instrument. Both of these instruments are described in detail in the following sections.

Organizational Culture Inventory. The organizational culture inventory is a normalized and valid research instrument from Human Synergistics International of Plymouth, Michigan (Balthazard & Cooke, 2004). Since its introduction, the inventory assessed thousands of organizations and completed by almost three million respondents world-wide (Balthazard & Cooke, 2004). This instrument has also been translated into several languages to include French, German, Japanese, and Spanish (Cameron & Quinn, 1999). It is suggested that this is the most globally accepted organizational culture instrument in the world (Balthazard & Cooke, 2004). With this success comes a price

however, if a researcher wants to conduct research using this tool, the researcher must pay a premium \$1550 to the parent company (Cameron, 2004).

The OCI measures 12 distinct but interrelated sets of behavioral norms and expectations that may describe how an organization behaves (Balthazard & Cooke, 2004). The behavioral norms measured by the OCI were defined by two dimensions, the concern for people as well as a concern for the task being the first, and satisfaction needs being the second (Balthazard & Cooke, 2004). The 12 measures then fall within these categories. Overall, this instrument is comprised of 225 items (Cameron, 2004).

To simplify this lengthy instrument, Van der Post, de Coning, and Smit (1997) developed a shortened version of the OCI. This version evaluated the major elements within an organization's culture. The new instrument is designed to provide insight to the norms and attitudes of an organization's members, just as in the OCI (Van der Post, de Coning, & Smit, 1997). The primary difference between the OCI and the shorter version is that the shorter version examines subcategories of organizational culture in further detail. This instrument is divided into 15 sections the researchers deemed important in the organization, once again, conceptualized from the OCI.

The study by Van der Post and colleagues (1997) used 408 respondents in the management, supervisor, and worker levels, in an effort to validate the differences among the 15 sub-categories. While the instrument's results are not intended to assign an organization to a specific culture, as the Organizational Culture Assessment Instrument does, it does provide insight to the norms and attitudes of these 15 categories for individuals within an organization (Van der Post, de Coning, & Smit, 1997). Of these 15 sub-categories, three will be described in detail as it may give clarity in the responses of

the organizational culture assessment instrument, which is the main instrument used in this research. These three sub-categories may have the strongest relationship with mentoring as assessed through this research. Human resource orientation, performance orientation, and organizational integration are the sub-categories that will be explored, as well as how each may be related to mentoring.

Human Resource Orientation. Human resource orientation is described as the extent to which the organization is perceived as having a high regard for its human resources (Van der Post, de Coning, & Smit, 1997). This section questions whether an organization views its employees as a valued resource and important contributor to its success. Eisenberger, Huntington, Hutchison, and Sowa (1986) suggested that a high regard for human resources could determine the effort level given from individuals. The higher the level of regard, the more personnel tend to feel obligated to their organization. In these circumstances, personnel feel that they must do everything in their power to reach the organizations goals. If the company views personnel as individuals that they care for, this obligation may become bigger. For example, research has shown that human resources relates positively to satisfaction and commitment to the organization (Eisenberger, Fasolo, & Davis-LaMastro, 1990).

Satisfaction and commitment to the organization may influence a mentoring session. It is suggested that if personnel see that their organization cares for them and become committed to the organization; members may take mentoring seriously as it may prepare them for long-term advancement (Kram, 1985). Protégés may also be willing to hold themselves more accountable if they have a feeling of commitment to the

organization. Accountability or performance orientation is the next sub-category discussed.

Performance Orientation. This section will assess the emphasis that is placed on individual accountability for clearly defined results and a high level of performance. If accountability is not a priority for any area within the organization, chances are, the idea or practice may become ineffective or become obsolete (Van der Post, de Coning, & Smit, 1997). Accountability, as valued by an organizational culture, is a driving force for successful mentoring (Lankau, Riordan, & Thomas, 2005). Accountability allows time and effort to be put toward a mentoring session rather than pushing it aside for a more opportunistic time. Accountability also puts someone in charge of the process (Rousseau, 1990). If nobody owns the process, the process cannot be fixed when it is broken. Several players will point fingers at each other as for the cause of the mistake and the solution, in most cases, will never be discovered. At the onset of a mentoring relationship, both parties should discuss roles and responsibilities that each member is expected to adhere to (Lankau, Riordan, & Thomas, 2005). One such role they could discuss is the transfer of knowledge, which is the next subcategory discussed.

Organizational Integration (knowledge). This subcomponent of organizational culture describes the degree to which members are actively encouraged to operate toward the achievement of the overall organizational objectives. In essence, integration exams how ideas and information are shared within different sections of the organization (Van der Post, de Coning, and Smit, 1997). With proper integration in place, organizational knowledge may enhance both the mentor and the protégé in performance and the drive for new knowledge that may lead the organization toward a more efficient and effective

mindset (Schultz, 2001). This knowledge transfer continues with the ways leaders exchange information and how they tend to mold their subordinates into a useful commodity to the organization (Huber, 1991). Superiors may act as conduits of organizational resources such as providing career advice, training opportunities, emotional support, and information flow (Wayne, Shore, & Liden, 1997).

Organizational Culture Assessment Instrument. The other widely-accepted instrument to study organizational culture is called the Organizational Culture Assessment Instrument (OCAI) (Cameron & Quinn, 1999). This instrument has been used in over 10,000 organizations worldwide (Cameron, 2004). In this assessment, members are given scenarios that will ultimately describe the certain fundamental cultural aspects that each organization can be. Six dimensions are rated within this tool. The first is the characteristics of the organization. The second characteristic involves leadership style. The third looks at the bonding mechanism that holds the organization together. The fourth area describes the emphasis that drives the organizations strategy. The fifth area determines what an organization considers as success, and the last area ultimately determines how employees are treated given their culture (Cameron, 2004). Detailed descriptions of areas that may have a direct impact on mentoring are given in the following sections.

Organizational Leadership. Leadership can influence the overall culture of any organization (Rousseau, 1989). Leadership in this situation determines how the leader interacts with a subordinate (Cameron, 2004). The style of leader may determine how a culture is structured (Cameron, 2004). Yukl (1989) stated that some leaders ultimately manipulate the followers to act as they do. One way to manipulate an employee is by

using mentoring to bring across a leader's point-of-view. Leadership and the willingness to mold an employee may be conducted through mentoring. The way a leader holds himself may determine if mentoring will remain successful (Kram, 1985). Leaders may also cause protégés to either trust or distrust them through the leader's actions (Graen Novak, & Sommercamp, 1982). Without trust, a protégé may view mentoring as ineffective (Kram, 1985).

Criteria for Success. This next area determines what is deemed important to the organization and viewed to make the organization successful. A successful mentoring program is defined as a program that requires culture to capture the ideas and values that are deemed important to a company (Lankau, Riordan, & Thomas, 2005). Mentoring cultures also routinely and continually learn and develop (Zachary, 2004). If the organization already possessed a correct understanding of its own culture, mentoring would be easier to implement as it could become part of that overarching culture (Lankau, Riordan, & Thomas, 2005).

Management of Employees. This subcomponent of organizational culture assesses how employees are managed within an organization (Cameron, 2004). Specifically, this section will discuss how managers communicate and support their subordinates. Communication and support are suggested to be key ingredients in effective mentoring (Kram, 1985). Support and proper communication help to achieve advancement and success within an organization (Ragins & Cotton, 1999). Support is also part of the career functions discussed by Kram (1985) for effective mentoring.

These relationships show that culture can indeed impact the effectiveness of mentoring. Since three areas of the OCAI are stated to directly impact mentoring, it may

be possible that the other three areas may have an impact as well. This cultural assessment instrument provides usable data used to assess the organization's values and norms. Understanding culture can open the eyes of leaders as they discover what is actually perceived important within that organization. Management may find that it is not actually practicing what it preaches. In these circumstances, an organization may not be performing as efficiently as it should be.

Often, the culture of an organization is shaped by its leaders. The behavior that is modeled by the leader and the management team can ultimately shape the culture and practices of the organization. Important ideas are emphasized and rewarded, while other ideas may be punished. The behavior of members of the senior team, their reactions in a crisis and what they routinely talk about, can set the tone of the culture (Cameron & Quinn, 1999). If mentoring becomes a routine task, chances are, mentoring will become long-lived and successful (Lankau, Riordan, & Thomas, 2005).

Previous research has not fully explored the relationship gender, ethnicity, and organizational position has with organizational culture. Research within mentoring, on the other hand, has assessed positive relationships from these variables as discussed in hypotheses 1 through 4. Since this research is exploring the relationship of organizational culture and mentoring, perhaps these variables will have a similar relationship with organizational culture. In accordance with these research objectives, gender, ethnicity, and organizational position will be explored in relation to the perceptions on organizational culture.

Hypothesis 5: Male and female respondents will not differ on perceptions of organizational culture

Hypothesis 6: Respondents will not differ on perceptions of organizational culture across organizational position

Hypothesis 7: Respondents will not differ on perceptions of organizational culture by ethnicity

Culture is suggested to influence mentoring by determining the importance of mentoring within a given organization. Taking these ideas into practice, the analysis of individuals' perceptions of an organizations willingness to strive in a certain area is believed to lead to an enhanced outcome. If an organization's culture does not support mentoring, mentoring will have difficulty taking a prime position in everyday activity (Lankau, Riordan, & Thomas, 2005). In other words, a good organizational culture promoting mentoring will be more successful than those that do not. In accordance with this research objective and previous findings, hypothesis 8 is:

Hypothesis 8: There will be a positive relationship between organizational culture and mentoring

Hypothesis 8A: There will be a positive relationship between organizational culture and career-related mentoring

Hypothesis 8B: There will be a positive relationship between organizational culture and psychosocial mentoring

Hypothesis 8C: There will be a positive relationship between organizational culture subcomponents and mentoring

Hypothesis 8D: There will be a positive relationship between organizational culture subcomponents and career-related mentoring

Hypothesis 8E: There will be a positive relationship between organizational culture subcomponents and psychosocial mentoring

CHAPTER 3

METHOD

Overview

Data was collected by administering an 88-item questionnaire to two organizations utilizing formal mentoring programs and with access to virtual communities. This questionnaire was a web-based survey in which participants included civilian employees as well as active duty personnel. This questionnaire was electronic and accessible from the subjects' computer. Two types of organizations were used in the collection of data, one being a contracting section and the other being a manpower and personnel section. To encourage participation, the organizational leaders explained the necessity of the questionnaire and the potential impact formal mentoring and organizational culture could make within their organizations. The participants also were provided with an electronic cover letter that reinforced confidentiality and anonymity. See Appendix B for the instrument used in this research.

The expectations of the participants were included in a cover letter and on the front page of the electronic survey booklet. The cover letter also summarized the purpose of the research and described how to get in contact with the researcher if the participant had any questions.

Participants

The survey participants were a sample population that included members of the United States Air Force (USAF). The participants came from two distinct organizations from within the same facility. The first was a contracting agency having formal mentoring and access to virtual communities (electronic mentoring). The second section

was a manpower and personnel section also having formal mentoring and access to virtual communities. The number of possible participants was approximately 130 civilian and 70 military personnel. Of those personnel surveyed, 18% ($n = 35$) of the respondents provided usable data. Weekly reminders from the researcher were sent during the collection period. Senior leadership also encouraged participation weekly. Responses were received evenly over the six-week duration. Data were then coded by the researcher and a second researcher verified the accuracy of the data. There were no mistakes noted by the researcher.

Measures

Demographic characteristics of interest within this questionnaire were organizational position, ethnicity, age, and gender.

Effective Mentoring. In order for mentoring to be effective, Kram (1985) suggested that mentoring sessions should have certain career and psychosocial functions. The modified Mentoring Effectiveness Scale, from Tepper, Shaffer, & Tepper (1996), was used to measure general tendencies that discuss these functions. Among the tendencies measured were counseling, teaching, support, and coaching roles that the Air Force provides to its subordinates. This scale is a 21-item, Likert-type scale. The original scale was a five-point scale ranging from “not at all” (1) to “to a very large extent” (5). Typical items included “Regarding your protégé, to what extent have you...shared personal experiences as an alternative perspective, demonstrated good listening skills, and served as a role model?” Mentoring Effectiveness was an average of the response of the total 21-item scale. The internal consistency of the Mentoring Effectiveness Scale was reported .92 ($N = 322$) by Tepper, Shaffer, & Tepper’s (1996)

research. The instrument used in this research found the internal reliability of mentoring to be .94 ($N = 35$).

Formal Mentoring. Different styles of organizations, such as the Air Force, may benefit from one style of mentoring more than another. This section was to determine if the organization has formal or informal mentoring by stating “yes” or “no”. The analysis then used the Tepper, Schafer, and Tepper (1996) scale to determine the effectiveness of each style of mentoring (Same scale as above). Items 43 through 49 and item 63 assessed the career function of mentoring. Items 50 through 62 assessed the psychosocial function of mentoring. Mentoring overall combines these functions and was assessed in items 43-63.

Virtual Communities. Electronic mentoring is another style of mentoring that may be used to benefit organizations in regards to the style of mentoring used. The electronic mentoring scale was either “yes” or “no”. Items 64 through 67 assessed virtual communities within the questionnaire. The internal consistency was measured .89 ($N = 35$)

Organizational Culture. The Organizational Culture Assessment Instrument (OCAI) was comprised of six categories, and under each category were four alternatives. These four alternatives helped to determine if the Air Force was one of four organizational cultures; clan, adhocracy, market, or hierarchy. A detailed description of these terms can be found in chapter two. Six categories helped to determine the dominant characteristics of an organization, organizational leadership, management of employees, the organization’s glue, strategic emphasis, and criteria for success. In each of these six categories, 100 points were divided among the four questions, as weighted by the

respondent depending on how closely the question described the respondent's organization. Each category must have a subtotal of 100 points. These numbers were then coded 1 to 5 depending on the value given. Values ranging from 0 to 19 were coded as a 1. Values ranging from 20 to 39 were coded as a 2. Values ranging from 40 to 59 were coded as a 3. Values ranging from 60 to 79 were coded as a 4. Lastly, values ranging from 80 to 100 were coded as a 5. Questions 19-22 assessed the dominant characteristics of the organizational culture. Questions 23-26 assessed the perceptions of how employees are managed. Questions 31-34 assessed the perceptions of the organizational glue for that organization. Questions 35-38 assessed the strategic emphasis of the organization. Questions 39-42 assessed what the employees viewed as components critical for success. The instrument allowed for the current view within the organization as perceived by the organizational member. The internal consistencies for each category are shown in Appendix A and Appendix C, Table A1 for previous research and Table C1 for internal consistencies found in this research.

Insert Table A1 about here

Three other areas were used to collect organizational data as it related to culture. These areas included human resources orientation (items 70, 71, 74, 81, and 83), organizational integration (items 69, 75-79), and performance orientation (items 68, 72, 73, 80, 82, 84, and 85). Human resource orientation assesses the extent to which the organization is perceived as having a high regard for its human resources and if these human resources are an important contributor to success (Van der Post, de Coning, &

Smit, 1997). This section contained five items based off Van der Post, de Coning, and Smit's (1997) condensed version of the organizational culture index. These five items had a Cronbach's Alpha of .86 ($N = 408$) according to Van der Post, de Coning, and Smit's (1997) research. This research found the internal consistency to be .85 ($N = 35$). Items were based on a 7-point Likert type scale that ranged from "strongly disagree" to "strongly agree." Typical items included "This organization views its employees as important contributors to the organization's success" (Van der Post, de Coning, & Smit, 1997).

Performance orientation helps to determine the emphasis that is placed on individual accountability for clearly defined results and a high level of performance. Once again, this section was a 7-point, Likert type scale ranging from "strongly disagree" to "strongly agree." The Cronbach's Alpha for this section was determined to be .91 ($N = 408$) according to Van der Post, de Coning, and Smit's (1997) research. The research within this thesis found the internal reliability to be .76 ($N = 35$). Typical items included "In this organization little emphasis is placed on the achievement of goals" (Van der Post, de Coning, & Smit, 1997).

The last section for organizational culture included organizational integration. This area described the degree to which members actively shared ideas and information within different sections of the organization (Van der Post, de Coning, & Smit, 1997). This section was a 7-point, Likert type scale ranging from "strongly disagree" to "strongly agree." The Cronbach's Alpha for this section was determined to be .79 ($N = 408$) according to Van der Post, de Coning, and Smit's (1997) research. The research within this thesis found the internal reliability to be .83 ($N = 35$). Typical items included

“In this organization the sharing of information between departments and work groups is not encouraged.” (Van der Post, de Coning, & Smit, 1997).

Organizational culture overall was assessed using all of the items described above. Within the assessment instrument, items 19 through 42 and 68 through 88 were used to assess organizational culture as a whole. The internal consistency found for organizational culture was .87 ($N = 35$). Assessments also included each of the subcomponents of organizational culture. The item numbers are listed next to each subcomponent explanation above.

Demographic Information. Data regarding organizational rank, ethnicity, age, sex, tenure, occupational specialty, and mentoring relationships were collected in questions one through 20. The responses were grouped to ensure equal weighting among the items of interest.

Mentoring Relationships. With respect to mentoring relationships, respondents were protégés only. The respondent was asked if the mentors are a part of the same organization as the respondent. Other questions of interest included how long they have known their mentor in years and months, how long they have been involved in their mentoring relationship, and how long they were assigned to their unit before a mentoring relationship began.

Organizational Position (Rank). Respondents were asked to select their current rank from a list of fourteen choices developed from the basic Air Force rank structure. Based on the rank of the respondents, rank was grouped into two groups. The first group contained respondents ages 34 and under coded as one, and the second group contained

respondents ages 35 and above, coded as two. Age and rank are synonymous within the realms of military populations (Korten, 2004).

Gender. Gender was used to assess the differences of perceptions that occur among male and female respondents. The instrument assessed differences of perceptions on organizational culture as well as formal mentoring. Males were coded as 1 and females were coded as 2.

Ethnicity. Respondents were asked to provide information about their ethnicity. Ethnicity was used to assess the differences of perceptions occur among majority respondents (white) and minority respondents (all others). The instrument assessed differences of perceptions on organizational culture as well as formal mentoring. Majority respondents were coded as “1” and minority respondents were coded as “2”.

CHAPTER 4

RESULTS

Overview

A summary of the respondents' results to the formal mentoring assessment instrument are provided in the following chapter. One significant limitation to this research is the small population of respondents ($N = 35$). According to Tabachnick and Fidell (2001), a common used rule of thumb for testing beta coefficients is to have the number of respondents greater than or equal to $104 + m$, where m equals the number of independent variables. For testing the R^2 values, the number of respondents should be greater than or equal to $50 + 8m$. In either case, the number of respondents ($N = 35$) was below the allowable standards for linear regression. Therefore, t tests and bivariate correlations were used to assess the respondent's data.

Tests of Hypotheses

All testing was conducted by the use of t tests or bivariate. Although not as descriptive as regression, t tests are used to compare interval or ratio data from two independent populations (Benson, McClave, & Sinich, 2005). For testing within this research, AFMC directed using mission-driven mentoring, thus, may not be completely independent. For the remainder of this research, however, the populations will be assumed independent. A t test compares these populations and tests whether the two populations differ in perceptions of a chosen variable. Bivariate correlations, on the other hand, suggest describing a relationship between two variables, x and y , and tests whether a correlation may exist between the chosen variables. Since the data collected was quantitative and normally distributed, the Pearson correlation coefficient was used.

Correlation coefficients can range in value from -1 (a perfect negative relationship) to $+1$ (a perfect positive relationship). A value of 0 indicates no linear relationship (Benson, McClave, & Sinich, 2005). These tests can be used on any data set with a population greater than 30 respondents. Further descriptions of these tests and why these tests were used are located in the following sections. The results from the first three hypotheses will be presented from t tests.

Hypothesis 1. Hypothesis 1 tested how male and female respondents would differ on perceptions of formal mentoring. The hypothesis suggested that male respondents would have a greater positive perception of formal mentoring than female respondents. A t test for the first hypothesis was accomplished using SPSS (version 13.0) predictive analysis software. Prior to performing the analysis, data items were recoded (males = 1, $n = 22$; females = 2, $n = 13$).

Within the t test, the Levene statistic found that variances were assumed equal for formal mentoring based upon the gender of the respondent ($F = .57$; $p > .05$). The t statistic was found to be $t(33) = .88$, $p > .05$; thus hypothesis 1 was not suggested to be statistically significant. The data suggest that not enough confidence is available to support hypothesis 1.

Insert Table C2 about here

Hypothesis 2. Hypothesis 2 tested whether respondents would differ on perceptions of formal mentoring given a difference in ethnicity. This hypothesis suggested that majority respondents would have a greater positive perception of formal mentoring than those respondents who were a minority. A t test was again used to address

the second hypothesis. Prior to performing the analysis, data items were recoded such that Ethnicity (majority = 1, $n = 29$; minority = 2, $n = 6$). Since the populations were not considered to be approximately equal, the test may show inconclusive data.

Within the t test, the Levene statistic found that variances were assumed equal for formal mentoring based upon the rank of the respondent ($F = 2.77$; $p > .05$). The t statistic was found to be $t(33) = .53$, $p > .05$, thus hypothesis 2 was not suggested to be statistically significant. The data suggest that not enough confidence is available to support hypothesis 2.

Insert Table C3 about here

Hypothesis 3. Hypothesis 3 tested whether respondents would differ on perceptions of formal mentoring given a difference in the respondent's rank. This hypothesis suggests that respondents which were higher rank in the organization would have a greater positive perception than lower ranking respondents. A t test was once again used to address the third hypothesis. Prior to performing the analysis, data items were recoded similar to hypothesis two such that Rank was coded 1 for respondents ≤ 34 years of age, $n = 16$; and was coded 2, respondents ≥ 35 years of age, $n = 19$). The rank was approximately equal among the respondents (mostly GS 11 or GS 12), thus, age was used to determine the difference between higher and lower rank.

Within the t test, the Levene statistic found that variances were assumed equal for formal mentoring based upon the rank of the respondent ($F = .76$; $p > .05$). The t statistic was found to be $t(33) = .49$, $p > .05$, thus hypothesis 3 was not suggested to be

statistically significant. The data suggest that not enough confidence is available to support hypothesis 3.

Insert Table C4 about here

Hypothesis 4. Hypothesis 4 tested whether a positive relationship occurred between virtual communities and formal mentoring. Hypothesis 4 also tested whether a positive relationship between virtual communities and career-related items existed. The last test within hypothesis 4 included whether a positive relationship occurs between virtual communities and psychosocial items. A bivariate correlation was used for the fourth hypothesis and was accomplished using SPSS (version 13.0) predictive analysis software. Virtual communities consisted of 4 items describing how often virtual communities are used as well as perceptions on virtual communities from the respondents. Formal mentoring consisted of career (8) and psychosocial (13) items with a total of 21 items.

The most significant finding overall was that virtual community had a significant correlation with formal mentoring for both psychosocial ($r = .62, p < .01$) and career ($r = .38, p < .05$) mentoring aspects as well as with mentoring overall ($r = .57, p < .01$).

Insert Table C8 about here

Hypothesis 5. Hypothesis 5 tested the assumption that gender would have a difference of perceptions on organizational culture. A t test was also used to assess the

fifth hypothesis. Prior to performing the analysis, data items were recoded (males = 1, $n = 22$; females = 2, $n = 13$).

Within the t test, the Levene statistic tested the assumption of homogeneity within the variance. This test found that variances were assumed equal for organizational culture based upon the gender of the respondent ($F = .10$; $p > .05$). The t statistic was assessed to be $t(33) = .75$, $p > .05$; thus hypothesis 5 was not suggested to be statistically significant.

Given the statistical difference on perceptions of organizational culture by gender, the data also assessed a greater mean score among females ($M = 3.39$; $SD = .54$) than males ($M = 3.26$; $SD = .44$). Although females were assessed to have a greater mean score, the data is very close numerically suggesting no difference in perceptions of organizational culture. The data support hypothesis 5 and suggest no difference between male and female perceptions of organizational culture.

Insert Table C5 about here

Hypothesis 6. Hypothesis 6 tested the assumption that rank would not have a difference in perception on organizational culture. A t test was also used to address the sixth hypothesis. Prior to performing the analysis, data items were recoded similar to hypothesis two such that Rank was coded 1 for respondents ≤ 34 years of age, $n = 16$; and was coded 2, respondents ≥ 35 years of age, $n = 19$).

Within the t test, the Levene statistic found that variances were assumed equal for organizational culture based upon the rank of the respondent ($F = .87; p > .05$). The t statistic was assessed to be $t(33) = .47, p > .05$, thus hypothesis 6 was not suggested to be statistically significant.

Given the statistical difference on perceptions of organizational culture by rank, the data assessed a greater mean score among lower ranking respondents ($M = 3.35; SD = .52$) than higher ranking respondents ($M = 3.27; SD = .45$). Although lower ranking respondents were assessed to have a greater mean score, the data is very close numerically suggesting no difference in perceptions of organizational culture. The data support hypothesis 6 and suggest no difference between higher or lower ranking participant perceptions of organizational culture.

Insert Table C6 about here

Hypothesis 7. Hypothesis 7 tested the assumption that respondents would not differ on perceptions of organizational culture based upon ethnicity. A t test was also used to address the seventh hypothesis. Prior to performing the analysis, data items were recoded such that Ethnicity (majority = 1, $n = 29$; minority = 2, $n = 6$). The population was not considered approximately equal.

Within the t test, the Levene statistic found that variances were assumed equal for organizational culture based upon the rank of the respondent ($F = 1.76; p > .05$). The t statistic was assessed to be $t(33) = 1.63, p > .05$, thus hypothesis 7 was not suggested to be statistically significant. Given the statistical difference on perceptions of

organizational culture by ethnicity, the data assessed a greater mean score among minority respondents ($M = 3.59$; $SD = .32$) than majority respondents ($M = 3.25$; $SD = .49$). Although minority respondents were assessed to have a greater mean score, the data is very close numerically suggesting no difference in perceptions of organizational culture. The data support hypothesis 7 and suggest no difference between majority and minority participant perceptions of organizational culture.

Insert Table C7 about here

Hypothesis 8. Hypothesis 8 tested whether a positive relationship existed between organizational culture and mentoring. This hypothesis also tested whether a relationship existed between organizational culture and career or psychosocial mentoring. A bivariate correlation for the seventh hypothesis was accomplished using SPSS (version 13.0) predictive analysis software. Organizational culture consisted of 45 items to include the organizational culture subcomponents as discussed in the methods section of this report. Formal mentoring consisted of career items (8) and psychosocial items (13) with a total of 21 items.

There was very little evidence of a strong correlation between organizational culture and mentoring at the .05 level of significance ($p = .07$). However, at the .1 level of significance, a possible correlation exists between organizational culture and mentoring ($r = .29$, $p < .10$). This suggests that a weak positive correlation may exist. To investigate the possibility of a correlation existing between organization culture and formal mentoring further, each subcomponent of organizational culture was tested against

formal mentoring. Once these tests were accomplished, each of the subcomponents of organizational culture was tested against the career functions of mentoring, followed by testing the subcomponents of organizational culture against the psychosocial functions of mentoring.

The most significant finding for the subcomponents of organizational culture with respects to formal mentoring was organizational glue ($r = .30, p < .10$). All other subcomponents were found slightly above the .10 level of significance and thus were disregarded. The next step was to determine how the subcomponents of organizational culture affect the career and psychosocial functions of formal mentoring.

Under the career function of formal mentoring, organizational culture overall was assessed to determine if a correlation existed ($r = .32, p < .10$). A positive correlation was determined to exist once again between career mentoring and organizational culture. The subcomponent organizational integration also had a significant weak correlation with career mentoring ($r = .28, p < .10$). The dominant characteristics of the organization also assessed a significant correlation with career mentoring ($r = .31, p < .10$).

Under the psychosocial function of mentoring, only one correlation was assessed with respect to organizational culture. A single positive correlation was assessed between organizational glue and psychosocial mentoring. ($r = .37, p < .05$) A correlation table for organizational culture and formal mentoring is provided in Appendix C, Table C8. Correlations were measured for organizational culture and its subcomponents as well as formal mentoring and its functions.

Insert Table C8 about here

Summary

This chapter provided a summary of the results from the formal mentoring instrument. Although the first three hypotheses as well as hypotheses 5, 6, and 7 were not supported, significant positive correlations were determined between organizational culture and formal mentoring for the eighth hypothesis. Also of significance within hypothesis 8 was that the organizational glue of the organization, organizational integration, and dominant characteristics of the organization may correlate with the career aspects of formal mentoring. Organizational glue was also assessed to have a significant correlation with formal mentoring, this time in the psychosocial aspects.

Overall, a positive correlation exists between virtual communities and all aspects of formal mentoring as suggested in hypothesis 4. This may be a significant finding to help develop an organizational culture capable of enhancing formal mentoring.

CHAPTER 5

DISCUSSION

Overview

This purpose of this research was to assess how organizational culture can have an effect on formal mentoring. Using the formal mentoring assessment instrument, respondents provided data to assess whether or not organizational culture effected formal mentoring. These respondents represented a small population within the United States Air Force from two agencies located at a large, Midwestern Air Force Base.

Correlations were found to suggest that organizational culture indeed had an influence on formal mentoring. Hypothesis 1, 2, and 3 did not suggest enough confidence to support any findings, thus the data could not confirm perceptions of gender, ethnicity, or organizational position differed on formal mentoring. Perhaps differences in perceptions actually exist, however, given the small population ($N = 35$); an accurate assessment could not be obtained based on the response rate.

Hypotheses 5, 6, and 7 measured the differences between gender, ethnicity, and organizational position as compared to differing perceptions of organizational culture. There was no significant difference found in the tests based upon the perceptions of organizational culture. In other words, individuals within the organization may view its culture similarly. Given the sample size was not approximately equal on hypothesis 7; however, the test may not be statistically accurate based on sample error.

Correlations were suggested to exist in hypothesis 4 and hypothesis 8. Hypothesis 4 explored the suggestion that virtual communities would have a positive influence on mentoring. Overall, the formal mentoring assessment instrument found a positive correlation between virtual communities and all aspects of formal mentoring. First of all, a positive correlation may have existed between virtual communities and formal mentoring. This supports the research accomplished by Ridings, Gefen, and Arinze (2002) in which the researchers suggested that a positive correlation did indeed exist between virtual communities and mentoring. Further investigation also found the virtual communities also have a positive correlation with career-related and psychosocial items within mentoring. This research could ultimately help the Air Force in that virtual communities should be made available to help achieve effective mentoring.

Hypothesis 8 found that a positive correlation existed between organizational culture and formal mentoring. This supports research by Lankau, Riordan, and Thomas (2005) in which these researchers suggest that if mentoring becomes a routine task within the organizational culture, mentoring will become long-lived and successful.

Hypothesis 8 also found that the organizational glue of the organization also showed a positive correlation with formal mentoring. In other words, the way an organization holds itself together based on trust, teamwork, etc., could have a positive correlation with mentoring. If the organization values trust and teamwork, perhaps mentoring could be influenced positively. Organizational glue was also assessed to have a significant positive correlation with the psychosocial items of mentoring as well. Organizational glue can influence the sense of pride, identity, and sense of competence of an individual as well as influence career-related aspects of a mentoring relationship. In

essence, organizational glue may be one of the aspects a leader focuses on to influence a positive mentoring relationship as part of the culture.

Organizational integration was also found to have a positive correlation with the career aspects of formal mentoring. This section helps to assess how knowledge is shared among the organization. The research found that mentoring may be a way to exchange information across the organization; thus causing a positive correlation. The analysis found from the study may help contribute to further research with the subcomponents of organizational culture and how they may influence mentoring.

The dominant characteristics of the organization also correlated positively with the career aspects of formal mentoring. In this subcomponent of organizational culture, procedures and structure determine how an organization is managed. In essence, if the organization deems mentoring to be important, then leaders as well as followers will institute practices merely for career advancement purposes. These positive correlations may explain what areas are considered important to this particular population and thus may be areas of concern for leadership in creating an organizational culture that supports formal mentoring.

Individual Characteristics

The study assessed gender, ethnicity, and organizational position specifically. The analysis did not support that differences exist among any of these characteristics in terms of how respondents view organizational culture or mentoring. The low number of respondents may have led to the insignificance assessed between these individual characteristics.

Limitations

The researcher acknowledges that limitations exist within this study. Although the internal consistencies for each category were acceptable and similar to previous research, the first limitation involves the survey population. First of all, the respondents were tested at a single Air Force installation across two different units. This is not a population that represents the Air Force in its entirety on its views of organizational culture and formal mentoring. Given the population within this study, generalizability may be lacking based upon civilian respondents. In essence, age and organizational position may not be synonymous given respondents were outside the active military structure. Also of concern with the population was the small number of returns for the formal mentoring assessment instrument. Very few respondents from the entire population produced measurable results at an 18% rate of return. This low rate of return allowed the researcher to assess correlations through bivariate and t tests only, which may not support significant validity for hypotheses.

The next limitation acknowledged by the researcher is that the Organizational Culture Assessment Instrument (OCAI) may be too cumbersome to assess influences of organizational culture on mentoring. The instrument was designed to assess the type of culture an organization has dependent upon the subcomponents built into the instrument. It was not designed to use against other instruments with a Likert type scale. The OCAI was designed to score each subcomponent based on 100 points to determine what type of culture existed versus a 1 to 7 scale.

Another limitation acknowledged by the researcher is that self-reports may also become an issue when the measures reported are not verifiable by other means

(Podsakoff & Organ, 1986). In other words, there are no means of cross-validating or verifying people's descriptions of their feeling or intentions to the self-report.

Podsakoff and Organ (1986) suggest that common method variance is compounded when two or more measures are taken from the same respondent in order to conduct correlation analysis among them. In this circumstance, the respondent could provide a link for the shared variance between the measures and not the measures themselves. In essence, validation deals with each measure individually and it cannot account for the interaction caused by the respondent. Podsakoff and Organ (1986) suggest that there is no way to prove or disprove the covariance is due to a true interaction between the measures or simply imposed by the respondent as artificial covariance.

The last limitation the researcher acknowledges is that the variables used within the questionnaires were focused at the group or organization versus the individual respondent within the concepts or organizational culture. In this circumstance, Podsakoff and Organ (1986) suggest that organizational citizenship behavior represents individual behavior that is discretionary to the organization as a whole. In other words, it is impossible to fully justify questions based on organizations to be answered by individuals. From this notion, errors may exist within the given data sets designed to assess organizational culture.

Future Research

To further assess the Air Force in its entirety, future research should test how organizational culture effects formal mentoring across a more representative sample; possibly through a web based survey administered to all functions that require formal

mentoring Air Force wide. The results would assess a much larger population and help to assess this instrument in much greater detail. This further research can help lead to a more in-depth understanding of how organizational culture has an impact on formal mentoring within the Air Force.

Another area of interest would be to involve sections that still use informal mentoring as a tool within their organization. This would allow leaders to assess how organizational culture effects informal or formal mentoring as well as what type of mentoring would work better within the organizational culture that is already established.

Conclusion

This study assessed strong positive correlations between virtual communities and all aspects of formal mentoring. This may suggest that virtual communities may have a significant impact on formal mentoring. Many respondents who used virtual communities expressed strong interest in the reliability and availability of the virtual assets. The Air Force has already created an electronic mentoring tool called E-Vector, but has not advertised its existence to the Air Force as a whole. Since many aspects of the military are becoming electronic, such as email, virtual Military Personnel Flights, virtual pay, etc, perhaps providing training from electronic mentoring, as well as advertising its existence, may have a profound influence for the growth of mentoring in the Air Force.

For the leaders of organizations, determining what aspects of their culture are deemed important can further enhance the productivity of mentoring. Overall, organizational culture was assessed to have a positive correlation on formal mentoring. From this study, respondents reported a positive correlation to the career function of

formal mentoring through the organizational glue of the organization, how the organization integrates across individual units, and the dominant characteristics of the organization. Organizational glue was assessed to have a significant positive correlation with the psychosocial function of mentoring. This may prove that organizational glue may be of particular interest to the leaders of the organization to enhance formal mentoring. These positive correlations may explain what areas are considered important to this particular population and thus may be areas of concern for leadership in creating an organizational culture that supports formal mentoring.

Appendix A: Figures and Tables

Figure A1: *Kram's Mentoring Functions*

Career Functions	Psychosocial Functions
Sponsorship	Role Modeling
Exposure-and-Visibility	Acceptance-and-Confirmation
Coaching	Counseling
Protection	Friendship
Challenging Assignments	

Table A1: *Internal Consistencies for the Organizational Culture Assessment Instrument*

Reliability Coefficients as reported by Cameron & Quinn (1999)		
Culture Type	Chronbach's Alpha	<i>N</i>
Clan	.80	965
Adhocracy	.75	965
Market	.90	965
Hierarchy	.62	965

Appendix B: Formal Mentoring Assessment Survey

Mentoring Survey

Purpose: To present you an opportunity to contribute information involving your organization's culture and how your culture may have an effect on formal mentoring. This survey will also obtain information on the benefits of mentoring and how it can be maximized and sustained in an organizational environment associated with highly transient employees.

Mentor: An individual with experience and knowledge committed to either formally or informally provide support to you and increase your upward mobility.

Protégé: A junior organizational member who receives guidance and support from a mentor.

Participation: We would greatly appreciate your participation in our data collection effort. Your participation is COMPLETELY VOLUNTARY. Your decision to not participate or to withdraw from participation will not jeopardize your relationship with the Air Force Institute of Technology, the U.S. Air Force, or the Department of Defense.

Confidentiality: We ask for some demographic information in order to interpret results more accurately. ALL ANSWERS ARE CONFIDENTIAL. No one other than the research team will see your completed questionnaire. Findings will be reported at the group level only. Reports summarizing trends in large groups may be published.

Contact information: If you have any questions or comments about the survey, please contact Capt Rieker at the telephone numbers, fax, mailing addresses, or e-mail addresses listed below.

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INSTRUCTIONS

- Base your answers on your own thoughts and experiences
- Be clear when asked to write in a response or when providing comments

Please click on the appropriate information as requested for the following questions. Definitions for key words are provided below:

- **Mentor** is defined as an individual with experience and knowledge committed to provide support to you and increase your upward mobility.
- **Protégé** is defined as a member who receives guidance and support from a mentor.
- **Formal mentoring** is defined as a relationship where a mentor has been assigned to a protégé by your organization

1. Do you currently have a formal mentor?	Yes <input type="radio"/>	No <input type="radio"/>
---	------------------------------	-----------------------------

If you answered **NO**, please stop answering survey questions. If you answered **YES**, please continue onto question 2. Definitions are provided below:

- For the remainder of the survey, please use your **current mentor** to answer the questions.
- **Organization** refers to your branch or squadron level you are, or have been, assigned to when mentoring took place.

2. Do you regularly use structured electronic mentoring (mentor using a computer)	Yes <input type="radio"/>	No <input type="radio"/>
3. What is/was the rank of your formal mentor? (These will be in a drop down menu for a web-based survey, it will show each individual rank)	<input type="radio"/> E1-E9 <input type="radio"/> O1-O10 <input type="radio"/> GS1-GS15 <input type="radio"/> WG1-WG15 <input type="radio"/> SES <input type="radio"/> Unknown _____	
4. What is your formal mentors' ethnicity?	<input type="radio"/> White <input type="radio"/> American Indian or Alaskan Native <input type="radio"/> Black or African-American <input type="radio"/> Asian (e.g. Asian Indian, Chinese, Japanese, Korean) <input type="radio"/> Native Hawaiian or Pacific Islander <input type="radio"/> Other (Specify): _____ <input type="radio"/> Unknown	
5. How long have you known your formal mentor?	Years _____	Months _____
6. How long have you been involved in your formal mentoring relationship?	Years _____	Months _____
7. How long have you been assigned to your unit before a formal mentoring relationship began?	Years _____	Months _____
8. What gender is your formal mentor?	Male _____	Female _____
9. What is your mentor's age (If estimated, please check the estimated box)?	Years _____	Estimated _____

Please click on the appropriate information as requested for questions 10 through 18. Please respond with a *specific number* and *not* a range. This section refers to information about you.

- **Organization** refers to your branch or squadron level you are, or have been, assigned to when mentoring took place.

10. How long have you been in the Air Force or DOD (Do not include prior service)?	Years _____	Months _____
11. If prior enlisted, please indicate the number of years for your prior service (Otherwise skip to question 12)	Prior Service: Years _____	Months _____
12. Years in your Primary AFSC or occupational code?	AFSC _____	Years _____
13. How long have you been assigned to your current organization?	Years _____	Months _____
14. Your Gender:	Male <input type="radio"/>	Female <input type="radio"/>
15. Your Age?	Years _____	
16. Your Rank (Civilian or military)? (These will be in a drop down menu for a web-based survey, it will show each individual rank)	<input type="radio"/> E1-E9 <input type="radio"/> O1-O10 <input type="radio"/> GS1-GS15 <input type="radio"/> WG1-WG-15 <input type="radio"/> SES	
17. What is your ethnicity?	<input type="radio"/> White <input type="radio"/> American Indian or Alaskan Native <input type="radio"/> Black or African-American <input type="radio"/> Asian (e.g. Asian Indian, Chinese, Japanese, Korean) <input type="radio"/> Native Hawaiian or Pacific Islander <input type="radio"/> Other (Specify): _____	
18. What is your highest academic degree earned?	<input type="radio"/> High School or GED <input type="radio"/> Some College or Technical College <input type="radio"/> Associates Degree <input type="radio"/> Technical College Degree <input type="radio"/> Bachelor's Degree <input type="radio"/> Master's Degree <input type="radio"/> PHD/Professional Degree <input type="radio"/> Other (Specify): _____	



The following section addresses your organization’s culture.

- This survey contains six categories, and under each category you will see four alternatives followed by a Subtotal.
 - o You have 100 points to divide among these four alternatives, depending upon how closely your organization is described for each group of four alternatives.
 - o The spreadsheet will automatically add up each section to ensure 100 points is obtained in each category.
 - o The totals for each section will be shown to you in the block marked Subtotals.
 - o Each category total must add up to 100 points. Do not use decimals.
- An EXAMPLE for how to correctly answer the next section is shown below:

	CURRENT
19. The organization is a very personal place. It is a lot like an extended family. People seem to share a lot of themselves.	<u>10</u>
20. The organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.	<u>10</u>
21. The organization is a very results oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.	<u>70</u>
22. The organization is a very controlled and structured place. Formal procedures generally govern what people do.	<u>10</u>
Subtotals	<u>100</u>

- **Organizational culture** is referred to as the “identity” or “how things work” in your place of employment.
- For this survey, **organization** refers to your current branch or squadron level in your current position where you are formally mentored.

	CURRENT
19. The organization is a very personal place. It is a lot like an extended family. People seem to share a lot of themselves.	_____
20. The organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.	_____
21. The organization is a very results oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.	_____
22. The organization is a very controlled and structured place. Formal procedures generally govern what people do.	_____

	CURRENT
Subtotals (100)	_____
23. The leadership in the organization is generally considered to exemplify mentoring, facilitating, or nurturing.	_____
24. The leadership in the organization is generally considered to exemplify entrepreneurship, innovating, and risk.	_____
25. The leadership in the organization is generally considered to exemplify a no-nonsense, aggressive, results-oriented focus.	_____
26. The leadership in the organization is generally considered to exemplify coordinating, organizing, or smooth-running efficiency.	_____
Subtotals (100)	_____
27. The management style in the organization is characterized by teamwork, consensus, and participation.	_____
28. The management style in the organization is characterized by risk-taking, innovation, freedom, and uniqueness.	_____
29. The management style in the organization is characterized by competitiveness, high demands, and achievement.	_____
30. The management style in the organization is characterized by security of employment, conformity, predictability, and stability in relationships.	_____
Subtotals (100)	_____
31. The glue that holds the organization together is loyalty and mutual trust. Commitment to this organization runs high.	_____
32. The glue that holds the organization together is commitment to innovation and development. There is an emphasis on being on the cutting edge.	_____
33. The glue that holds the organization together emphasis on achievement and goal accomplishment. Aggressiveness and winning are common themes.	_____
34. The glue that holds the organization together is formal rules and policies. Maintaining a smooth running organization is important.	_____
Subtotals (100)	_____
35. The organization emphasizes human development. High trust, openness, and participation persist.	_____
36. The organization emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.	_____
37. The organization emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.	_____
38. The organization emphasizes permanence and stability. Efficiency, control, and smooth operations are important.	_____
Subtotals (100)	_____
39. The organization defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people.	_____
40. The organization defines success on the basis of having the most unique or newest products. It is a product leader and innovator.	_____
41. The organization defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is vital for success.	_____
42. The organization defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical.	_____

CURRENT
Subtotals (100) _____

This section will assess how you generally feel about the *effectiveness* of your most *current* formal mentor. If you have/had *more than one* formal mentor at your current location (or your last place of employment with a formal mentor), please choose the formal mentor you spend the *most* time with. For each statement, please choose the number that indicates the extent to which you agree with each statement. Use the scale below for your responses.

To what extent has your mentor...

① Not at All	② To a Slight Extent	③ To Some Extent	④ To a Large Extent	⑤ To a Very Large Extent	
43. Encouraged you to try new ways of behaving on the job.	①	②	③	④	⑤
44. Discussed your questions or concerns regarding feelings of competence, commitment to advancement, relationships with peers and supervisors or work/family conflicts.	①	②	③	④	⑤
45. Demonstrated good listening skills in your conversations.	①	②	③	④	⑤
46. Conveyed feelings of respect for you as an individual.	①	②	③	④	⑤
47. Encouraged you to talk openly about anxieties and fears that detract from your work.	①	②	③	④	⑤
48. Shared personal experiences as an alternative perspective to your current challenges.	①	②	③	④	⑤
49. Displayed attitudes and values similar to your own.	①	②	③	④	⑤
50. Assigned responsibilities to you that have increased your contact with people who will judge your potential for future advancement.	①	②	③	④	⑤
51. Reduced unnecessary risks that could have threatened your opportunities for promotion.	①	②	③	④	⑤
52. Helped you meet new colleagues.	①	②	③	④	⑤
53. Given you projects or tasks that have prepared you for higher positions.	①	②	③	④	⑤
54. Helped you finish projects or tasks to meet deadlines that otherwise would have been difficult to complete.	①	②	③	④	⑤
55. Encouraged you to prepare for advancement.	①	②	③	④	⑤
56. Given you projects that present opportunities to learn new skills.	①	②	③	④	⑤
57. Given projects that have increased your contact with higher level managers.	①	②	③	④	⑤
58. Protected you from working with other managers or work units before you knew about their likes/dislikes, opinions on controversial topics, and the nature of the political environment.	①	②	③	④	⑤

① Not at All	② To a Slight Extent	③ To Some Extent	④ To a Large Extent	⑤ To a Very Large Extent
59. Kept you informed about what is going on at higher levels in the organization or how external conditions are influencing the organization.			① ② ③ ④ ⑤	
60. Provided support and feedback regarding your performance.			① ② ③ ④ ⑤	
61. Given you projects that increased written and personal contact with senior officials.			① ② ③ ④ ⑤	
62. Interacted with you socially outside of work.			① ② ③ ④ ⑤	
63. Served as a role model.			① ② ③ ④ ⑤	

This section will address how you generally feel about mentoring through the use of a virtual community (e.g. mentoring by using electronic mail). For each statement, please choose the number that indicates the extent to which you agree with each statement. Use the scale below for your responses.

To what extent do you...

① Never	② Rarely	③ Sometimes	④ Frequently	⑤ Always
64. Utilize virtual communities as a means to enhance formal mentoring			① ② ③ ④ ⑤	
65. Seek advice from your mentor through the use of virtual communities			① ② ③ ④ ⑤	
66. Generally have confidence in virtual communities as an alternative method for formal mentoring			① ② ③ ④ ⑤	
67. Use virtual communities to enhance your skills and knowledge about the organization			① ② ③ ④ ⑤	

This section will address how you generally feel about the *culture* you work in. *Organizational culture* is referred to as the identity of your place of employment.

- ***Organization*** refers to your current or most recent branch or squadron level that you were formally mentored.
- For each statement, please fill in the circle for the number that most accurately describes how you see the situation in your organization.
- Use the scale below for your responses.

	①	②	③	④	⑤	⑥	⑦
	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree
68. In this organization there is little emphasis on doing a good job.	①	②	③	④	⑤	⑥	⑦
69. In this organization the sharing of information between departments and work groups is not encouraged.	①	②	③	④	⑤	⑥	⑦
70. This organization has a high regard for its employees.	①	②	③	④	⑤	⑥	⑦
71. This organization does not treat its employees as if they are a valued resource.	①	②	③	④	⑤	⑥	⑦
72. In this organization, little emphasis is placed on performance standards.	①	②	③	④	⑤	⑥	⑦
73. This organization places a low premium on high performance.	①	②	③	④	⑤	⑥	⑦
74. This organization does not really value its employees.	①	②	③	④	⑤	⑥	⑦
75. In this organization support across work group and departmental boundaries is strongly encouraged.	①	②	③	④	⑤	⑥	⑦
76. The different sub-units in this organization are not encouraged to work together effectively toward the achievement of the organization's goals.	①	②	③	④	⑤	⑥	⑦
77. In this organization employees from different departments are encouraged to work together for the overall good of the organization.	①	②	③	④	⑤	⑥	⑦
78. In this organization inter-departmental cooperation is very strongly encouraged.	①	②	③	④	⑤	⑥	⑦
79. In this organization managers go out of their way to ensure that different departments operate in a coordinated way.	①	②	③	④	⑤	⑥	⑦
80. This organization sets no performance standards for its employees.	①	②	③	④	⑤	⑥	⑦
81. This organization treats its employees as though they have nothing to contribute towards the organization's performance.	①	②	③	④	⑤	⑥	⑦
82. In this organization little emphasis is placed on the achievement of goals.	①	②	③	④	⑤	⑥	⑦
83. This organization views its employees as important contributors to the organization's success.	①	②	③	④	⑤	⑥	⑦
84. In this organization there is a norm to maintain progress and strive towards excellence.	①	②	③	④	⑤	⑥	⑦
85. The goals which are set in this organization are tough but realistic.	①	②	③	④	⑤	⑥	⑦
86. I believe formal mentoring is considered an important part of the culture of my organization.	①	②	③	④	⑤	⑥	⑦
87. Upper-level management considers formal mentoring to be important.	①	②	③	④	⑤	⑥	⑦
88. Mentoring adds value to your organization by helping you to achieve the goals set by your organization	①	②	③	④	⑤	⑥	⑦

Reassurance of Confidentiality

ALL ANSWERS ARE CONFIDENTIAL. No one other than the research team will see your completed questionnaire. Findings will be reported at the group level only. We asked for some demographic information in order to interpret results more accurately. Reports summarizing trends in large groups may be published.

Questions/Concerns

If you have any questions or concerns please feel free to contact the research team members listed on the front page of the questionnaire. We appreciate your participation and would be happy to address any questions you may have regarding the questionnaire or our research in general.

Feedback

If you are interested in getting feedback on our research results, please provide us with the following personal information so we can reach you at a later date:

Name: _____

Address: _____

Phone: _____

Appendix C: Tables C1 through C8

Table C1
Variable Descriptive Statistics and Reliabilities

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	Coefficient Alpha
Effective Mentoring	35	3.13	.46	.94
Career Function	35	3.47	.41	.86
Psychosocial Function	35	2.96	.41	.93
Organizational Culture	35	3.31	1.56	.87
Performance Orientation	35	4.87	.94	.76
Human Resource Orientation	35	5.3	.18	.85
Organizational Integration	35	4.73	.41	.83
Clan Culture	35	2.26	.22	.78
Adhocracy Culture	35	1.58	.10	.77
Market Culture	35	1.64	.31	.81
Hierarchy Culture	35	2.19	.19	.71
Virtual Communities	35	2.81	.26	.89

Table C2

*Independent Sample t test (Two Tailed)**Levene's Test t test for Equality of Means*

Dependent Variable	Independent Variable	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>t</i>	<i>df</i>	<i>p</i>
Mentoring	Male	22	3.23	.76	.57	.45	.87	33	.39
	Female	13	2.96	1.00					

Table C3		<i>Independent Sample t test (Two Tailed)</i>			<i>Levene's Test t test for Equality of Means</i>				
Dependent Variable	Independent Variable	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>t</i>	<i>df</i>	<i>p</i>
Mentoring	Majority	29	3.16	.78	2.77	.11	.53	33	.60
	Minority	6	2.96	1.22					

Table C4		<i>Independent Sample t test (Two Tailed)</i>					<i>Levene's Test t test for Equality of Means</i>			
Dependent Variable	Independent Variable	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>t</i>	<i>df</i>	<i>p</i>	
Mentoring	Low Rank	16	3.05	1.00	.76	.39	.49	33	.63	
	High Rank	19	3.19	.72						

Table C5		<i>Independent Sample t test (Two Tailed)</i>					<i>Levene's Test t test for Equality of Means</i>			
Dependent Variable	Independent Variable	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>t</i>	<i>df</i>	<i>p</i>	
Org Culture	Male	22	3.26	.44	.10	.76	.75	33	.46	
	Female	13	3.39	.54						

Table C6		<i>Independent Sample t test (Two Tailed)</i>					<i>Levene's Test t test for Equality of Means</i>			
Dependent Variable	Independent Variable	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>t</i>	<i>df</i>	<i>p</i>	
Org Culture	Low Rank	16	3.35	.52	.88	.36	.47	33	.65	
	High Rank	19	3.27	.45						

Table C7		<i>Independent Sample t test (Two Tailed)</i>					<i>Levene's Test t test for Equality of Means</i>			
Dependent Variable	Independent Variable	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>t</i>	<i>df</i>	<i>p</i>	
Org Culture	Majority	29	3.25	.49	1.76	.19	1.63	33	.11	
	Minority	6	3.59	.32						

Table C8

Inter-correlations between Dependent and Independent Variables

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	3.13	0.85	1																
2	3.31	0.48	.29 [^]	1															
3	2.81	1.07	.96**	---	1														
4	3.41	0.87	.88**	.32 [^]	.72**	1													
5	2.81	1.07	.57**	---	.62**	.38*	1												
6	1.94	0.14	---	.32 [^]	---	.31 [^]	---	1											
7	1.89	0.15	---	.41*	---	---	---	---	1										
8	1.89	0.16	---	---	---	---	---	---	---	1									
9	1.91	0.16	.30 [^]	---	.37*	---	.45**	---	---	---	1								
10	1.93	0.18	---	---	---	---	---	-.33 [^]	---	---	.47**	1							
11	1.93	0.17	---	.39*	---	---	.31 [^]	---	---	---	---	---	1						
12	4.73	1.16	---	.89**	---	.28 [^]	---	---	.33*	---	---	---	.48**	1					
13	4.87	0.99	---	.93**	---	---	---	---	.36*	---	---	---	---	.78**	1				
14	5.3	1.26	---	.88**	---	---	---	---	.29 [^]	---	---	---	.29 [^]	.72**	.82**	1			
15	1.37	0.49	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1		
16	1.54	0.51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	
17	1.17	0.38	---	---	---	---	---	---	---	---	---	---	---	---	.32 [^]	---	---	---	1

^an ranged from 6 to 35 for all columns^bPearson Two-tailed Coefficients[^]p < .10

*p < .05

**p < .01

- | | |
|------------------------------|--------------------------------|
| 1. Effective Mentoring | 10. Strategic Emphasis |
| 2. Organizational Culture | 11. Criteria for Success |
| 3. Psychosocial Function | 12. Organizational Integration |
| 4. Career Function | 13. Performance Orientation |
| 5. Virtual Communities | 14. HRO |
| 6. Dominant Characteristics | 15. Gender |
| 7. Organizational Leadership | 16. Organizational Position |
| 8. Management of Employees | 17. Ethnicity |
| 9. Organizational Glue | |

Appendix D: Human Subject Research Review Forms



DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE OHIO

14 Nov 2005

To: Wright Site IRB
From: AFIT\ENV
Subject: 20060013-E

1. The undersigned have reviewed the protocol and affirm that it meets all requirements for ethical human experimentation as set forth in current Federal, DoD, Air Force, and AFRL guidance.
2. Specifically, we confirm that the proposed project meets the following criteria:
 - a. The investigators are fully qualified to carry out the proposed research and understand the duties required by AFRLI 40-1 para 1.4.
 - b. The proposal has undergone adequate peer review to ensure its scientific quality.
 - c. The research is relevant to valid Air Force needs.
 - d. The required information can only be obtained by use of human subjects.
 - e. The experimental design is adequate to resolve the hypothesis or answer the research question.
 - f. Every effort has been made to minimize the number of human subjects and the discomfort and risk to which each will be exposed.
 - g. The laboratory or other facility has undergone adequate safety inspection and is fully prepared to respond to medical emergencies. The medical monitor understands the duties contained within AFRLI 40-402, paragraph 1.6.
3. The personnel and resources required to implement this protocol are available within the division. It is the division's intention to carry out this research if the protocol is approved.

//Signed//
SHARON G. HEILMANN, Major, USAF
Assistant Professor, AFIT/ENV/GEM

//Signed//
JEFF BIDERGER, Major, USAF, MC, MS
AFRL/HEPG
Aircrew Performance and Protection Branch

//Signed//
MARK N. GOLTZ, Ph.D., P.E., D.E.E.
Interim Head, Department of Systems and
Engineering Management

//Signed//
DANIEL J. RIEKER, Capt, USAF
Graduate Student, AFIT/ENV/GEM



**DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE OHIO**

14 Nov 2005

To: Wright Site IRB
From: AFIT/ENV
Subject: 20060013-E

1. Request division and IRB review of the protocol named above which should be considered as a freestanding protocol.
2. Request the following action by the IRB: approval of new protocol.
3. As principal investigator, the undersigned affirms that the protocol complies with the requirements for human experimentation set forth in Federal code and the DoD, Air Force, and AFRL instructions implementing it. In addition, the undersigned agrees to:
 - a. Ensure that all human research conducted under this protocol will conform to the written, approved document, including any restrictions imposed during the approval process.
 - b. Monitor the progress of this research and notify the IRB in writing within 24 hours of any unexpected event or medical misadventure.
 - c. Notify the IRB, in a timely manner, if either the risk or the benefit of the research appears substantially different from those represented in the protocol, or if early results clearly resolve the hypothesis.
 - d. Provide progress and final reports for research as required by the IRB as well as notifying the IRB of any publications resulting from this protocol.
 - e. Ensure that the originals and copies of the signed Informed Consent Document for all subjects are filed as required by AFRLI 40-402 and that all records of completed research are provided to the IRB administrator of the AFRL/HE for permanent archiving.

DANIEL J. RIEKER, Capt, USAF
Graduate Student, AFIT/ENV/GEM
Principal Investigator

**An Evaluation of How Organizational Culture
Can Perpetuate a Formal Mentoring Relationship**
F-WR-2006-0009-H

1. Principal Investigator

Daniel Rieker/Capt/USAF, AFIT/ENV, DSN 785-3636x7395,
daniel.rieker@afit.edu

2. Associate Investigators

- a. Sharon Heilmann/Major/USAF, AFIT/ENV, DSN 785-3636x7395,
sharon.heilmann@afit.edu
- b. Kent Halverson/Major/USAF, AFIT/ENV, DSN 785-3636x4709,
kent.halverson@afit.edu

3. Medical Consultant or Monitor

Jeff Bidinger/Major/USAF, AFRL/HEPG, DSN 785-4563,
Jeffrey.Bidinger@wpafb.af.mil

4. Facility/Contractor

Air Force Material Command (AFMC) Contracting Directorate (PK) and
AFMC/DPDL

5. Objective

The purpose of this study, as requested by the thesis sponsor, AFMC/PK, is to identify characteristics of an organization's climate necessary to sustain an effective formal mentoring program that can be sustained despite rotation of personnel at all levels. The results of this study will identify organizational climate characteristics associated with maintaining effective formal mentoring relationships.

6. Background

General Gregory Martin, retired, instituted the Mission-Driven Mentoring (MDM) process and tool for AFMC. This tool enables all AFMC headquarter offices to promote formal mentoring to civilian and military members as instructed from high-level leadership. General Martin has realized the benefits of mentoring and fully supports the MDM process and tool. General Martin is also quick to point out from AF Doctrine Document 1-1 that "leaders can only be created through an iterative process of development involving education, training, and expeditionary operations seasoned with experience and ongoing mentoring by more experienced leaders"(G.S. Martin, personal communication, March 29, 2005).

The leader within an organization may hold the key in establishing a relationship that maximize the benefits associated with mentoring (Graen & Scandura, 1986). The way leaders present themselves may determine how subordinates act beneath them (Yukl, 1989). Any area within an organization that a leader holds in high regard, the follower will ultimately focus upon. Culture helps in determining

these focus areas based upon what the organization emphasizes (Cameron & Quinn, 1999). A leader, in essence, focuses on the current culture of an organization. If the leadership shows a genuine concern for mentoring, the followers will find a way to prioritize mentoring into everyday activities (Cameron, 2004).

As mentioned, leaders focus on the culture and ideals of an organization. If the leader fails to instill the importance of their ideals to their subordinates and mentoring is not viewed important within the culture, mentoring may fade away with the installation of a new leader, if this leader does not share the same views (Van der Post, de Coning, & Smit, 1997). These ideas should also be passed on to the successor so they may continue with the same importance as before.

This research will explore the relationship between culture and mentoring. It will also examine the proposition that organizational leadership may affect both culture and mentoring (Kram, 1985; Van der Post, de Coning, & Smit, 1997). As a hierarchal culture, the USAF primarily relies on procedures and processes that are formalized and structured (Cameron, 2004). Formal rules and policies are put in place to hold the organization together (Cameron & Quinn, 1999). In this type of culture, to be effective leaders must be coordinated, efficient and organized to keep the organization running smoothly (Cameron, 2004). Leadership style is said to be a very important sub-component of organizational culture (Cameron & Quinn, 1999). Therefore, with the Air Force being lead in a formal manner, perhaps the most effective mentoring relationship may exist between the Air Forces' formal culture and formal mentoring.

7. Impact

This study may help the Air Force's overall formal mentoring program and help Air Force leaders adhere to Air Force Policy Directive 36-34, Air Force mentoring protocol.

8. Experimental Plan

a. Equipment:

Equipment used will be computers only in which data will be collected from subjects through the use of an electronic survey.

b. Subjects:

Subjects will come from various AFMC headquarters offices to include AFMC/PK (Contracting) and AFMC/DPDL (Oversees formal mentoring program). Each area has command approval and has requested these respective areas to be analyzed with respects to organizational culture and formal mentoring. AFMC/PK will have approximately 100 subjects, while AFMC/DPDL can reach approximately 160 subjects. All subjects will be active duty or Department of Defense (DOD)-civilian personnel. All subjects will answer the survey on a voluntary basis and data will be strictly confidential. No exclusion clause will be added to this survey.

The age range for this survey will be from 18-years old to approximately 50-years old. The range for males to females is approximately seven males to every one female. No special subjects will be involved with this survey.

Anyone can take the survey that is being mentored formally through AFMC. Time commitment for each survey will be approximately 20-minutes to answer the survey through the use of a government furnished computer. No screening or special tests are required for this survey. A letter of intent for the survey and commander approval will be sent with each survey. No other recruitment procedures will be used.

c. Duration:

Each survey will take approximately 20-minutes and will be collected between December 1, 2005 and January 30, 2006.

d. Description of experiment, data collection, and analysis:

Each survey is 88-questions long. Data collected will help assess how perceptions of organizational culture can influence perceptions within formal mentoring. Organizational culture will assess leadership characteristics, ideas deemed important to the organization, and how employees are managed. These areas are suggested to influence how formal mentoring can be successfully implemented.

Analysis will include linear regression of the data to assess any if any correlation exists within the data. Data will be coded according to the scale of the survey questions, usually one through seven.

The only identifying information includes rank, Air Force Specialty Code, age, academic degree, and race. Demographic information will be used as discriminators to determine how each area views the mentoring process. Each unit within this area will be coded as well to help assure confidentiality. The data collected will be reported collectively at the group level only. The leaders for each organization will not see individual surveys.

e. On-site monitoring:

There will be no on-site monitoring for this survey.

f. Safety precautions:

There is no anticipated safety precautions needed for this survey.

9. Medical Risk Analysis

There are no anticipated medical risks involved with this survey.

10. Attachments

- a. Informed Consent Document
- b. Mentoring Survey
- c. Endorsement Letters

**Informed Consent Document
For
An Evaluation of How Organization Culture
Can Perpetuate a Formal Mentoring Relationship**

AFIT/ENV, Air Force Institute of Technology, WPAFB

Principal Investigator: Capt/Daniel Rieker, DSN 785-3636x7395, AFIT/ENV
daniel.rieker@afit.edu

Associate Investigators: Major/Sharon Heilmann, DSN 785-3636x7395, AFIT/ENV
sharon.heilmann@afit.edu

Major/Kent Halverson, DSN 785-3636x4709, AFIT/ENV
kent.halverson@afit.edu

1. **Nature and purpose:** You have been offered the opportunity to participate in “an evaluation of how organizational culture can perpetuate a formal mentoring relationship” research study. Your participation will occur sometime between 01 December 2005 and 31 February 2006, using your computer to answer a survey.

The purpose of this study, as requested by the thesis sponsor, Air Force Material Command (AFMC)/PK (Contracting), is to identify characteristics of an organization’s climate necessary to sustain an effective formal mentoring program that can be sustained despite rotation of personnel at all levels. The results of this study will identify organizational climate characteristics associated with maintaining effective formal mentoring relationships. This, in turn, may help the Air Force’s overall mentoring program.

The time requirement for each volunteer subject is anticipated to be a total of 1 visit of approximately one half hour each. A total of approximately 250-subjects will be enrolled in this study.

2. **Experimental procedures:** If you decide to participate, data will be given to AFMC/PK and AFMC/DPDL (Oversees Formal Mentoring), as well as any other interested departments. The survey will be electronic in nature and will be approved by the office’s respective chain-of-command for voluntary participation. Electronic surveys will conduct research into several areas of mentoring effectiveness and organizational culture. All information will remain anonymous as only group level results will be reported.

The only identifying information includes rank, Air Force Specialty Code, age, academic degree, and race. Demographic information will be used as discriminators to determine how each area views the mentoring process. The data collected will be reported collectively at the group level only.

All subjects are self-selected to volunteer to participate in the survey. No adverse action is taken against those who choose not to participate. Subjects are made aware of the nature and purpose of the research, sponsors of the research, and disposition of the survey results.

3. **Discomfort and risks:** Individual responses of the subjects will not be disclosed. Potentially identifying information collected will be stored in password protected files in a secure location. Data will not be reported in a manner which will allow identification of subjects or individual responses.
4. **Precautions for female subjects:** None
5. **Benefits:** You are not expected to benefit directly from participation in this research study.
6. **Alternatives:** Choosing not to participate is an alternative to volunteering for this study.
7. **Entitlements and confidentiality:**
 - a. Records of your participation in this study may only be disclosed according to federal law, including the Federal Privacy Act, 5 U.S.C. 552a, and its implementing regulations.
 - b. The decision to participate in this research is completely voluntary on your part. No one has coerced or intimidated you into participating in this program. You are participating because you want to. Capt/Daniel Rieker, or an associate, has adequately answered any and all questions you have about this study, your participation, and the procedures involved. Capt/Daniel Rieker can be reached at (937) 219-7744. You understand that Capt/Daniel Rieker, or an associate will be available to answer any questions concerning procedures throughout this study. You understand that if significant new findings develop during the course of this research, which may relate to your decision to continue participation, you will be informed. You further understand that you may withdraw this consent at any time and discontinue further participation in this study without prejudice to your entitlements. If you have any questions or concerns about your participation in this study or your rights as a research subject, please contact Major Jeff Bidinger at (937) 255-4563 or jeffrey.bidinger@wpafb.af.mil.

- c. YOU FULLY UNDERSTAND THAT YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE. YOUR COMPLETION OF THE SURVEY INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE HAVING READ THE INFORMATION PROVIDED ABOVE.



DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE OHIO

Thomas S. Wells, SES
Director of Contracting HQ AFMC/PK
4375 Chidlaw Rd, Suite S208
Wright Patterson AFB OH, 45433

Dear AFMC/PK staff,

AFMC/PK is determined to maximize formal mentoring effectiveness within our directorate. As part of the effort to reach this goal, PK must clearly understand the demographics and the associated perceived benefits of formal mentoring as well as its culture. The attached survey is an effort to collect information specifically targeting the culture of PK and how our culture can influence formal mentoring. The data collected will be part of an AFIT student research project in which I give full authority to Captain Daniel Rieker and his advisor, Major Sharon Heilmann, to conduct a survey to all members of the AFMC/PK staff.

Please take 10-15 minutes to complete this important survey. Your participation in this survey is completely voluntary. However, any information you may provide is essential to ensure that we're doing everything we can to support a formal mentoring culture. The survey will ask for some demographic information in order to interpret results more accurately. ALL ANSWERS WILL BE CONFIDENTIAL. In addition, I will not see the surveys individually. I am only interested in the results of the survey overall. No one other than the research team will see your completed questionnaire. If you have any questions, please feel free to contact the research team at (937) 255-3636x7359 or email at daniel.rieker@afit.edu or sharon.heilmann@afit.edu.

Sincerely,

THOMAS S. WELLS, SES
Director of Contracting



**DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE PERSONNEL CENTER
RANDOLPH AIR FORCE BASE TEXAS**

28 DECEMBER 2005

MEMORANDUM FOR CAPT DANIEL RIEKER

FROM: AFPC/DPAPS

SUBJECT: Request for Survey Approval

We have reviewed your request to conduct the Mentoring Survey and approved it for use with selected employees within AFMC/PK and AFMC/DPDL. We have assigned a Survey Control Number (SCN) of USAF SCN 05-135; valid through 30 June 2006. Please ensure that the SCN and expiration date appear within the survey, survey instructions and appropriate web site as well as on the initial document/e-mail introducing the survey.

With regard to the survey and its associated results, it is important to draw your attention to the provisions of the Freedom of Information Act (FOIA). Under the FOIA, the public can request the results of your survey. Furthermore, if the results will be released outside the Air Force, please follow proper approval procedures through Public Affairs before the results are released.

Questions or concerns can be directed to me at DSN 665-2448. We wish you much success with your data collection effort.

//Signed//

LOUIS M. DATKO
Chief, Air Force Survey Program



DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE OHIO

12 December 2005

MEMORANDUM FOR: Capt. Daniel Rieker
AFTT/ENV/GEM

FROM: AFRL/Wright Site Institutional Review Board

SUBJECT: IRB approval for the use of human volunteers in research

1. Protocol title: An Evaluation of How Organizational Culture Can Perpetuate a Formal Mentoring Relationship

2. Protocol number: F-WR-2006-0009-H

3. Risk: Minimal

4. Approval date: 15 November 2005

5. Expiration date: 15 November 2006

6. Scheduled renewal date: 15 October 2006

7. Type of review: Initial

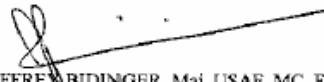
8. The above protocol has been reviewed and **approved** by the Wright Site IRB via **expedited** review procedures. This protocol meets the criteria for expedited review established by the U.S. Department of Health and Human Services per category (7): Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

9. Written documentation of informed consent is waived IAW 32 CFR 219.117 (c) (2) which allows an IRB to waive written consent if "the research presents no more than minimal risk and involves no procedures for which written consent is normally required outside of the research context." The investigator is still required to provide subjects with the IRB approved informed consent document prior to enrollment.

10. Any serious adverse event or issues resulting from this study should be reported immediately to the IRB. Amendments to protocols and/or revisions to informed consent documents must have IRB approval prior to implementation. Please retain both hard copy and electronic copy of the final approved protocol and informed consent document.

11. All inquiries and correspondence concerning this protocol should include the protocol number and name of the primary investigator. Please ensure the timely submission of all required progress and final reports and use the templates provided on the Wright Site IRB web site <https://www.he-internal.af.mil/org/IRB/index.htm>.

12. For questions or concerns, please contact your IRB administrator, Helen Jennings at (937) 255-0311 x232 or helen.jennings@wpafb.af.mil OR Lt. Douglas Grafel at douglas.grafel@wpafb.af.mil or (937) 255-0311 x202.



JEFFREY W. BIDINGER, Maj, USAF, MC, FS
Chair, AFRL/Wright Site IRB

DOD SINGLE PROJECT ASSURANCE

Air Force Institute of Technology

ASSURANCE OF COMPLIANCE WITH DEPARTMENT OF DEFENSE REGULATIONS FOR PROTECTION OF HUMAN RESEARCH SUBJECTS

*Using this Template, type on Organizational Letterhead, supplying where indicated information specific to the proposed research activity and your organization, including the required certification on the endorsement page.

Assurance of compliance with Department of Defense, Title 32, Code of Federal Regulations, Part 219 (32 CFR 219), "Protection of Human Subjects" and "Protection of Human Subjects in DoD Supported Research," August 19, 1991.

PART 1

The Air Force Institute of Technology, hereinafter known as the "facility," hereby gives assurance that it will comply with the Department of Defense Regulations for the Protection of Human Subjects (32 CFR 219); Title 10, United States Code, Section 980, Limitation on Use of Humans as Experimental Subjects (hereinafter referred to as 10 USC 980); Air Force Instruction AFI 40-402; DoD Directive DoDD 3216.2; and where applicable, 21 CFR 50, 21 CFR 56, and 45 CFR 46 (Subparts B, C, D) under the authority of the Department of Defense as specified below.

1. Statement of Principles and Policies

a. Ethical Principles

This facility is guided by the ethical principles regarding all research involving humans as subjects as set forth in the report of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research entitled, Ethical Principles and Guidelines for the Protection of Human Subjects of Research (the "Belmont Report"). In addition, the requirements set forth in Title 32 Part 219 of the Code of Federal Regulations (32 CFR 219) will be met for all DoD-supported research.

b. Facility Policy

(1) This facility acknowledges and accepts its responsibilities for protecting the rights and welfare of human subjects of research covered by this assurance.

(2) It is the policy of this facility that, except for research in which the only involvement of human subjects is in one or more of the categories exempted under 32 CFR 219.101(b)(1-6) or 219.101.e of the DoD regulations, this policy is applicable to

all research involving human subjects, and all other activities which are even in part such research, if either:

- (a) The research is sponsored by this facility, or
- (b) The research is conducted by or under the direction of any employee or agent of this facility in connection with his or her facility responsibilities, or
- (c) The research is conducted by or under the direction of any employee or agent of this facility using any property or component of this facility, or
- (d) The research involves the use of this facility's nonpublic information to identify or contact human research subjects or prospective subjects.

(3) It is the policy of this facility that, except for those categories specifically exempted by 32 CFR 219, no research investigator shall involve any human being as a subject in research unless the research investigator has obtained the legally effective informed consent of the subject, or for research intended to be beneficial to the subject, the subject's legally authorized representative. IRB waiver of informed consent, as defined at 32 CFR 219.116, is not permitted within DoD for research involving humans as experimental subjects (see Title 10, USC 980). Categories of exemption as defined above [32 CFR 219.101 paragraph (b)(1-6)] shall not be confused with minimal risk categories referenced in 32 CFR 219.110. Human subjects research defined as "minimal risk" is eligible for expedited review to the extent permitted by 32 CFR 219.110.

(4) This facility acknowledges and accepts its responsibilities for protecting the rights and welfare of human subjects of research covered by this policy.

(5) This facility assures that before human subjects are involved in research covered by this policy, proper consideration will be given to:

- (a) The risks to the subjects,
- (b) The anticipated benefits to the subjects and others,
- (c) The importance of the knowledge that may reasonably be expected to results, and
- (d) The informed consent process to be employed.

(6) This facility acknowledges that it bears full responsibility for the performance of all research involving human subjects, covered by this policy.

(7) This facility bears full responsibility for complying with federal, state, or local laws as they may relate to research covered by this policy.

(8) This facility encourages and promotes constructive communication among the research administrators, department heads, research investigators, clinical care staff, human subjects, and facility officials as a means of maintaining a high level of awareness regarding safeguarding of the rights and welfare of the subjects.

(9) This facility will exercise appropriate administrative overview carried out at least annually to insure that its practices and procedures designed for the protection of the rights and welfare of human subjects are being effectively applied.

(10) This facility will consider additional safeguards in research when that research involves pregnant women, children, other potentially vulnerable groups and human in vitro fertilization.

(11) This facility shall provide each individual at the facility conducting or reviewing human subject research (e.g., research investigators, department heads, research administrators, and research reviewers) with a copy of this statement of ethical principles and policy.

PART 2

Applicability of Assurance and Responsibilities:

A. In regard to the protocol entitled, "An Evaluation of How Organizational Culture Can Perpetuate a Formal Mentoring Relationship", Protocol Number F-WR-2006-0009-H, submitted on behalf of Captain Daniel Rieker, Principal Investigator, this facility has complied and will continue to comply with the requirements of 32 CFR 219 as specified below.

1. IRB Review

- a. The Wright-Site IRB reviewed and approved the above protocol.
- b. The IRB determined, in accordance with the criteria found at 32 CFR 219.111, and where applicable, 45 CFR 46 Subparts B, C, and D, that protections for human research subjects are adequate.
- c. The IRB has the authority to suspend or terminate approval of research activity in accordance with 32 CFR 219.113 because of (1) noncompliance with 32 CFR 219, this Assurance document, or the IRB's requirements; or (2) unexpected serious harm to subjects.

- d. The IRB has determined that legally effective informed consent (copy of document must be attached) will be obtained in a manner and method which meets the requirements of 32 CFR 219.116 and 219.117, and in the case of research involving children, 32 CFR 219.408.
- e. The IRB shall review, and have the authority to approve, require modification in, or disapprove changes proposed in this research activity.
- f. The IRB shall conduct continuing reviews of all research at intervals appropriate to the degree of risk, but not less than once per year (32 CFR 219.109(e)). The Chairperson at the request of any IRB member or Facility Official to consider any matter concerned with the rights and welfare of any subject may call the IRB into an interim review session.
- g. The IRB shall prepare and maintain adequate documentation of its activities in accordance with 32 CFR 219.115.
- h. The IRB shall report promptly to the facility Dean and HQ USAF/SGRC:
 - (1) Any serious or continuing noncompliance by investigators with the requirements of the IRB, and
 - (2) Any suspension or termination of IRB approval.
- i. The IRB shall report promptly to the facility Dean any information received concerning:
 - (1) Injuries to human subjects,
 - (2) Unanticipated problems involving risks to subjects or others, and
 - (3) Any changes in this research activity which are received and approved by the IRB.

2. Responsibilities of the Institution with the IRB

- a. The Air Force Research Laboratories authorizes designation of its IRB for review of the project named in this Assurance.
- b. Air Force Research Laboratories has provided and will continue to provide both meeting space for the IRB and sufficient staff to support the IRB's review and record keeping duties.
- c. In accordance with the compositional requirements of section 219.107 of 32

CFR 219, Air Force Research Laboratories has established an IRB as listed in the

attached roster. This IRB is responsible for the initial and continuing review of this activity and will observe the quorum requirements of 32 CFR 219.108.

3. Research Investigator Reporting Responsibilities

a. Research investigators shall report promptly to the IRB proposed changes in this research activity and the changes shall not be initiated without IRB review and approval except where necessary to eliminate apparent immediate hazards to the subjects.

b. Research investigators shall report promptly to the IRB any unanticipated problems involving risks to subjects and others.

4. Facility Responsibilities

a. This facility shall report promptly to HQ USAF/SGRC:

(1) Injuries to human subjects,

(2) Unanticipated problems involving risks to subjects or to other, and

(3) Any changes in this research activity which are reviewed and approved by the IRB and this facility.

b. In addition to the review and approval of the IRB, this facility reviewed and sponsors the project entitled, "An Evaluation of How Organizational Culture Can Perpetuate a Formal Mentoring Relationship."

PART 3

Air Force Institute of Technology

Facility certification and endorsement and HQ USAF/SGRC approval regarding this Assurance and the Project entitled: "An Evaluation of How Organizational Culture Can Perpetuate a Formal Mentoring Relationship." Protocol Number F-WR-2006-0009-H

1. I certify that the above Project was reviewed and approved by the Wright-Site IRB in accordance with the requirements of Part 219, Title 32 of the Code of Federal Regulations and this Assurance of Compliance on 12 December, 2005.

IRB Chairperson

Signature _____ Date _____

Jeffrey J. Bidinger, Maj, USAF, MC, FS
Chairperson, Wright Site IRB
AFRL/HEPG
2215 First Street, Bldg 33
Wright-Patterson AFB, OH 45433
937-255-4563
937-255-9687
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The Signatory Official must be a senior Facility Official who has the authority to commit the entire facility named in the Assurance application, as well as all of the Facility components to a legally binding agreement. Entities that the Signatory Official is not legally authorized to represent may not be covered under the Assurance. This individual must also have the authority to assure compliance of the Facility and all of its components to the terms of the Assurance. The IRB Chair and IRB members are not appropriate personnel to serve as the Signatory Official.

2. I certify that this facility endorses the above project and abides by the principles, policies, and procedures of Parts 1 and 2 of this Assurance of Compliance.

Authorized Facility Official

Signature _____ Date _____

Name and Title: Marlin U. Thomas, Ph.D.,
Address: Bldg. 640, 2950 Hobson Way
WPAFB, Ohio 45433-7765
Phone: (937) 255-3025
Fax: (937) 656-7302
E-mail: marlin.thomas@afit.edu

3. Responsible Research Investigator at Facility

I certify that I will abide by this Assurance, including the procedures stated in Part 2, paragraph 3.

Signature: _____ Date: _____

Name and Title: Major Sharon Heilmann
Address: Bldg. 640, 2950 Hobson Way
WPAFB, Ohio 45433-7765
Phone: DSN 785-3636x7395
Fax: (937) 656-4699
E-mail: Sharon.heilmann@afit.edu

THIS PART FOR HQ USAF/SGRC USE ONLY

3. All parts of this Assurance are in compliance with the requirements of Part 219, Title 32 of the Code of Federal Regulations; 10 USC 980; AFI 40-402; DoDD 3216.2; and where applicable, 21 CFR 50, 21 CFR 56, and 45 CFR 46 (Subparts B, C, D) under the authority of the Department of Defense

ASSURANCE NUMBER _____

HQ USAF/SGRC Approving Official

Signature _____ Date _____

Name: DONNAMARIA ROBINSON, Major, USAF, BSC

Address: HQ USAF/SGRC
Office of the Surgeon General
5201 I Leesburg Pike, Suite 1401
Falls Church, VA 22041

Telephone: (703) 681-7056

FAX: (703) 681-4518

E-Mail Address: Donnamaria.robinson@pentagon.af.mil

This assurance expires three years from the date of its approval. It must be updated regularly subject to a change in Signatory Official, the IRB Chair, the IRB membership, or of the policies and procedures to maintain this Single Project Assurance file current. A revised and dated IRB membership roster must be submitted if there is a change in the IRB membership. For its uninterrupted continuation, this Assurance must be renegotiated with HQ USAF/SGRC prior to its expiration.

Expiration Date: _____

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Vita

Daniel J. Rieker graduated with a bachelors of science in Civil Engineering from The Citadel, The Military College of South Carolina, in May of 1999. He then entered active duty in the United States Air Force in July of 1999. Being stationed at Shaw AFB in Sumter, SC, Daniel began work as a design engineer and construction manager. His next position landed Daniel as a commander in the Readiness Flight working with Nuclear, Chemical, and Biological Defense and Deterrence.

Daniel's next assignment brought him to Lackland AFB, Texas, where he was in charge of environmental engineering and policy for the installation. Next, Daniel served in Operation Iraqi Freedom where he once again used his talents in NBC defense to keep soldiers, marines, and airmen safe from any chemical attacks as well as any munitions that may be encountered.

Daniel returned to Lackland to work as chief maintenance engineer. Here, he ensured the installation energy policy was enforced as well as maintained over 2,000 facilities. Daniel was then chosen to attend the Air Force Institute of Technology to attain a Masters Degree in General Engineering Management.

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14. ABSTRACT The purpose of this research was to investigate how an organization's culture can have an effect on formal mentoring. Specifically, this thesis sought to determine if perceptions among gender, ethnicity, and organizational position differ for mentoring and organizational culture. Additionally, this thesis sought to determine if any correlations may exist between organizational culture and formal mentoring overall.					
15. SUBJECT TERMS Organizational Culture, Organizational Integration, Human Resource Orientation, Performance Orientation, Criteria for Success, Dominant Characteristics, Organizational Leadership, Management of Employees, Organizational Glue, Strategic Emphasis, Formal Mentoring, Career Mentoring Functions, Psychosocial Mentoring Functions					
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